

THE MICHIGAN FARMER,

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Relating to the Farm, the Garden, and the Household.

NEW SERIES.

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The Michigan Farmer,

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CONTENTS.

THE FARM:	
State Agricultural College—History of a Field.....	198
Plowing by Steam.....	198
How we Throw ourselves Away.....	198
The Swamp Lands of Michigan.....	194
Kalamazoo Horse Show.....	194
Cattle—The Devons as a Beef Breed.....	194
Raising and Keeping Cabbages.....	194
Death of a well known Brood Mare.....	194
THE GARDEN AND ORCHARD:	
Transactions of Am. Pom. Society.....	195
Treatment of Young Vines.....	195
The Gooseberry Midges.....	195
New Mode of Ripening Pears.....	195
Fresh Fruits Preserved.....	195
HORTICULTURAL NOTES:	
Layering—New Strawberry—New Apple—Mon- tain Seedling Gooseberry—Bourne Auguste—Salt for Plum Trees—A New Hardy Fumaria.....	195
FOREIGN AGRICULTURE:	
A Lecture on Breeding Horses.....	196
Progress of Woolen Manufactures, and Growth of Wool in Great Britain.....	196
FARM MISCELLANEA:	
Plowing Match and Sheep Shearing Festival—En- durance of Horses—Prevention of Bee Moths— Kicking Cows.....	196
EDITORIAL:	
The Late Frosts and their Effects.....	197
Worms in Hay—Information Wanted.....	197
The Crops and the Markets.....	197
Swamp Lands.....	197
New Wheat and Flour.....	197
Trial of Mowers.....	197
Challenge Answered.....	197
Literary News.....	197
Foreign News.....	199
HOUSEHOLD:	
Poetry: Jessie Owen—Delay.....	198
Explanatory.....	198
Recollections of Ireland.....	199
HOUSEHOLD VARIETIES:	
Fashions—A Domestic Necessity—A Sliding Scale of Politeness—Young Unmarried Italian Ladies— Moorish Courtships—Coleridge and the Jew—Cul- tivated Women.....	198
Mary's Married Life.....	198
Hints for Travellers.....	199
An Old Recipe.....	199
Cream Cheese.....	199
Markets.....	200

The Farm.

[The word Farm "Doctor" which occurs twice in our
article of last week, should read Farm Director.]

The State Agricultural College.

THE HISTORY OF A FIELD.

Last week, a statement of the work of the
students at the Agricultural College for the
month of May, was made, and the manner
presented in which the time spent in the sev-
eral kinds of work; is kept and summed up,
and turned over to the several departments
against which it is charged. For the purpose
of illustrating that statement still further, we
now present the history of a field. That
field is one which at the beginning of the
present term, or on the 6th of last April, was
for the greater part untouched forest. A
small portion on the west side was an old
slash, where the timber had been partially cut,
but it had grown up to under brush so that
it was worse to clear and reduce to tillable
condition than that which never had been
cleared. This field on our list is marked No.
13, and lies on the south side of the Cedar
river. It contains, by survey sixteen acres,
and now presents a fair promise for a crop of
oats. The record of this field commences
with the seventh of April, the day after the
term opened. It will be remembered that
the work time of each student for each day is
but three hours, and that when we say 33
students were employed in chopping, there
were really but eleven engaged at the same
time, as the thirty-three belonged to three
separate divisions, in equal proportion. We
commence the history thus, therefore:

Field No. 13, oat field south of river.
April 7.—Commenced clearing, with the
design of getting as much ready for oats as
the season would allow. 33 students employ-
ed in chopping, logging and cutting brush—
99 hours to real estate.
April 8.—30 students engaged in logging, 9
in chopping, 2 in burning brush; in all—126
hours to real estate.
April 9.—41 students logging, 6 chopping,

10 in picking and burning brush—171 hours
to real estate.

April 11.—36 students logging, 11 chop-
ping—141 hours to real estate.

April 12.—34 students logging, 11 chop-
ping, 1 burning brush, 1 picking up roots and
branches, 2 laying fence—147 to real estate.

April 13.—26 logging, 15 chopping, 5 lay-
ing and building fence, 1 picking up brush—
141 hours to real estate.

April 14.—34 logging, 8 chopping, 3 piling
up brush—heaps—135 hours to real estate.

April 15.—34 logging, 6 chopping, 1 pick-
ing up brush—143 hours real estate.

April 16.—32 logging, 10 chopping, 2
building fence and one picking up brush—135
hours real estate.

April 18.—18 logging, 2 chopping, 1 cut-
ting brush, 1 picking up—66 hours real es-
tate.

April 19.—6 logging, 3 chopping, 2 cutting
brush—33 hours real estate.

April 20.—5 logging, 2 chopping, 1 brand-
ing, 1 cutting brush—27 hours real estate.

April 21.—5 logging, 3 chopping, 2 picking
up brush—30 hours real estate.

April 22.—2 logging, 3 chopping, 2 picking
brush, 1 laying fence—24 hours real estate.

April 23.—4 logging, 1 chopping, 3 pick-
ing brush, 3 building fence—33 hours real es-
tate.

April 25.—1 logging, 15 picking up brush
and burning log heaps—48 hours real estate.

April 26.—2 logging, 9 branding and burn-
ing, 1 building fence—36 hours to real estate.

April 27.—9 logging, 1 chopping, 8 brand-
ing and burning, 1 building fence—67 hours
real estate.

April 28.—10 logging and branding, 12
branding and burning, and picking up brush
and half burned branches, and logs—66 hours
real estate.

April 29.—15 logging, 1 chopping, 8 brand-
ing and burning, 3 dragging with horse teams
—72 hours real estate, 9 hours to crops.

April 30.—18 logging, 13 branding and
picking up, 1 dragging—96 hours real estate;
3 hour to crops.

May 2.—26 logging and clearing up, 7
branding, 1 fencing, 1 surveying, and 1 drag-
ging—105 hour to real estate; 3 hours to
crops.

May 3.—16 logging, 11 branding and burn-
ing, 2 splitting rails, 1 plowing—87 hours real
estate; 3 hour crops.

May 4.—16 logging, 7 burning and branding
3 laying fence, 6 dragging—78 hours real es-
tate; 18 hours crops.

May 5.—12 logging, 10 branding and burn-
ing, 2 plowing, 7 dragging, and 1 sowing oats
66 hours real estate; 30 hours crops.

May 6.—6 logging, 5 branding and picking
up brush and roots, 5 plowing, 4½ dragging,
½ sowing oats—33 hours real estate; 30 hours
crops.

May 7.—10 logging, 5 branding and burn-
ing, 4 plowing, 1 sowing oats—45 hours real
estate; 15 hours crops.

May 9.—2 logging, 2 laying fence, 4 pick-
ing and burning brush, 5 plowing, 8 dragging
—18 hours real estate; 29 hours crops.

May 10.—4 dragging, 1½ plowing, ½ sowing
oats, 1 laying fence—real estate 3 hours;
crops 18 hours.

May 16.—5 students building fence—15
hours real estate.

Since the last date, no work has been done
in this field, so that there is nothing further
to record relative to it up to this date. From
the above data, however, it will be easily seen
what the cost of the field is and has been up
to the present time, especially as this is the
first year it has been put in cultivation.

The whole number of hours charged to the
field as on real estate account, because the
work has been expended in reducing wild tim-
bered land, to an arable field fit to bear crops
is 2,291, or an equivalent of 255 days of 9
hours each, which, valued at an average of 6
cents per hour, would make a money value
expended upon this field in addition to its first
cost of . . . \$137 70

40 day's work of one ox team at
a cost of maintenance equal to 40
cents per day . . . 16 00

First cost of field 16 acres at \$15
per acre . . . \$250

4 years' interest on same at 7
per cent. . . 70

320 00

Total cost of field \$31.58 per
acre, or . . . \$473 70

The crop put upon this field the present
season has been oats, which at the present
time look well and promise a fair return con-
sidering the rough state of the surface and
the number of stumps which occupy it. The
oats were mostly dragged in with heavy har-
rows. A portion of the field was an old
slash, and had to be plowed with two yoke of
oxen—a portion of the work which by right
should properly belong to real estate, as
"breaking up" is the improvement of land for
all future time, and necessarily must belong
as much to future crops to repay, as to the
first one. In this case, however, it has not
been done, and the plowing therefore has
been charged to the crops. The summing up
of the work on the crops therefore is as fol-
lows:

Time spent in plowing, harrowing, and sowing
seed, 163 hours at an average cost of 8 cents
per hour . . . \$13 44
15 hours of teams or 17½ days of one team at 40
cents . . . 7 00
Seed 40 bushels, the oats being sown at a little
over 2½ bushels per acre, at 50 cents per bushel
One year's interest on cost of field, at 7 per cent.
(\$473.70) . . . 33 16

If we estimate the crop as equal to 25 bushels only
per acre, there will be a return of \$75 bushels,
which, at 30 cents per bushel, is . . . \$112 50
The straw at 1 ton per acre, and a money value
of \$3.00 per ton makes a further return of . . . 45 00

\$157 50

It will thus be seen that after paying for
the work expended upon it, the seed used, the
interest upon the actual cost of the land, ev-
ery thing being included at a liberal rate, and
the estimate of crop being both in price and
quantity at the lowest rates, there will be a
surplus of \$83.90, to pay the cost of harvest-
ing. Or in fact, taken in another view, and
we think the most correct one, allowing the
value of the straw to pay for harvesting, the
students' labor properly directed have made a
piece of property that had been costing the
institution for annual interest on invest-
ment in purchase \$15.75, and was yielding
no return whatever, capable of yielding a
return, after paying the cost of crop, of a
revenue equal to \$7.50 on each acre or in-
vestment of \$31.58, the cost of the land. This
is at the rate of \$20.58 per cent. or at the
rate of 10 per cent., the land may be valued
as worth for this year \$75. But of this one-
half should be thrown off for value of build-
ings, implements and farm accommodations,
incidentals, without which the land could not
be made productive. This still leaves it as
worth more than it has yet cost.

This mode of testing the value of the stu-
dent's labor has been adopted in this instance,
because the field was one which has under-
gone the whole process of improvement, dur-
ing the present season, and since the opening
of the present term of the College, and under
our own personal observation, and it also af-
fords a very excellent test of the compara-
tive value of land improved and unimproved,
with a measure of the cost of improvement.

Plowing by Steam.

Illinois appears to be taking the lead of all
the other States in agricultural progressiveness.
A prize of \$6,500 has been placed at the
disposal of its State Agricultural Society for
the best steam plow, and, from a circular
sent us, we learn that a company has been
formed in the city of Chicago, with a capital
of \$50,000, for introducing into practical use
the traction locomotive rotary tiller of Thom-
as Kidd.

This subject is by no means a new one, al-
though but little attention has been given to
it until within two or three years past. We
will endeavor to present some information
showing what has already been done by oth-
ers, so that the ground may be better under-
stood than it now is.

England has been the experimental farm
for steam plowing, efforts having been made
twenty-seven years ago to reclaim and culti-
vate Chat Moss by steam machinery. An en-
gine, stationed at one end of a plot of land,
was employed to drag plows through the soil
by means of ropes passing over the drum of a
windlass. With some modifications of ma-
chinery, this system appears to have been the
most successful that has yet been attempted.
The person who has done most to render
plowing by steam, in England, as economical
in cultivating land as animal power, is Mr.
John Fowler, an agricultural engineer, who
has expended no less than \$100,000 for this

purpose. He employs a portable engine on
wheels, stations it at one end or headland of
a field; then at the other end he puts up a
frame called an anchor, on which there is a
drum, and the distance between this anchor
and the engine is the length of the furrow to
be turned over. And endless wire rope ex-
tends from a windlass on the engine around
the drum on the anchor frame, and to this
rope is attached a frame carrying six plow-
shares—the one placed a little behind the
other—and these turn over six furrows at
once. The engine winds the wire rope on
one end of its windlass while it is given off at
the other, and the plows are then dragged
forward towards the anchor, and when they
arrive at this point they are reversed, the an-
chor frame moved a little forward at one
headland while the engine moves itself for-
ward for the next six furrows, and the six
plows are then dragged back, turning over
six other furrows in returning. The engine
and anchor frame are thus moved at intervals
on the headlands, in parallel lines, but are sta-
tionary while the plows are working. This
system is very simple, and no power is ex-
pended, as in a locomotive steam plow, by
dragging the engine through the soft soil. It
is stated that the anchor frame can be shifted
and the plows reversed at the end, turning
nearly as fast as a team of horses can be
turned. By the same method of operating
the engine and windlass, other implements
for cutting up the soil have been tried as sub-
stitutes for the plow, such as rotary cultiva-
tors, resembling a series of revolving scrapers
for plunging into and stirring up the soil.—
Mr. J. Smith, of Wolston, England, has em-
ployed this method for five years with great
success, and has found it best to apply it in
the fall. It brings all the weeds and sods to
the surface, exposes their roots to the frosts
of winter, and kills them; and it is recorded
that stiff clay soils, by this process of culti-
vation, have become mellow and easily worked.

Another system of plowing, different in
principle, was illustrated on page 401, Vol.
VI., of the *Scientific American*, and consist-
ed of a locomotive and having broad-faced
wheels, which moved over the field to be
plowed, drawing a transverse frame, in
which were a series of revolving plows on
an endless chain. As the plows operated
at right angles to the forward motion of the
wheels, the action of this plow was very
defective. Another plow, upon the same
principle of operation by a locomotive en-
gine, was illustrated on page 297, Vol. VII.
of the *Scientific American*. It carried five
rotary cultivators, and its action impressed us
favorably, but it has not been able to contend
with Fowler's, which has taken nearly all the
steam plow prizes offered by the agricultural
societies in Great Britain. A locomotive
steam plow, with a broad spiral cultivator
dragging behind the engine, has also been
tried in England, but with no success.

Little has been done in our own country
in the way of steam plowing in comparison
with the efforts made in Great Britain; still,
we have made a beginning, and this is cheer-
ing.

In 1855, Obed Hussey, of Baltimore, the
well-known inventor of the mowing machine,
constructed a steam plow and tested it in Oc-
tober, 1856, as described on page 341, Vol.
XII., of the *Scientific American*; but since
that period we have not heard that it has ever
been used, nor the reason why. On the
10th of November, 1858, the steam plow of
Mr. Fawkes was exhibited and tested before
the State Agricultural Society of Illinois,
and although statements were then made that
it had been very successful, it does not ap-
pear to have satisfied the farmers of the
"Prairie State;" hence the prize we have
mentioned which is once more offered by the
State Agricultural Society. Mr. Kidd's
steam plow, to which we have alluded, is a lo-
comotive that carries its own endless railroad
to prevent sinking into the soil, and thus it is
intended to save the power that would oth-
erwise be expended to drag itself. It is, in
principle, similar to that illustrated on page
353, Vol. III., of the *Scientific American*,
and which, in England, is called "Boydell's
traction system." Its tillers are not common
plowshares, but double vertical revolving
screw cutters for cutting and stirring up the

soil, and they appear well adapted for this
purpose. Every American steam plow that
has yet been brought before the public em-
braces the locomotive principle of the engine
moving over the entire field, dragging a set of
plows, which is quite different in its nature
from Fowler's, the one which has been most
successful in Europe. The engine used for
operating a steam plow should also be capa-
ble of being applied to threshing, grinding
and other operations of a farm, as none of our
farmers can well afford to keep an engine for
plowing exclusively. In hilly countries the
steam plow will never be able to supplant
horses; but in such a State as Illinois, where
the farms are very large, the soil mellow and
the fields nearly level, and where fuel is abun-
dant, the steam plow appears to be invited to
success.—*Scientific American*.

How we Throw Ourselves Away.

These truthful remarks which we find in
the *Albany Evening Journal* are too good to
be thrown away. Read them young men, and
maidens, too, before you venture far alone on
the perilous voyage of life. Take a calm,
common sense view of your own abilities and
strength, and set about using them in such a
manner that at the close of your career the
melancholy truth may not be forced upon you
that you have thrown yourselves away:

"The world is full of men who are throw-
ing themselves away. We do not allude
merely to those whose ruin is brought on by
the common forms of vice, such as drunken-
ness, gambling, and other forms of sensuality,
but men who throw themselves away by less
flagrant errors.

"One fancies, for instance, that he ought
to be in public office; aspires to be consid-
ered a Clay, Webster, or a Benton; and neglect-
ing his business, runs after the will-o' wisp of
politics, till finally he ends in bankruptcy and
disgrace. Another, dissatisfied with the slow
return of a legitimate trade, embarks in specu-
lations, and not only ruins himself, but helps
to bring on a monetary crisis, which drags
down hundreds of innocent people. A third,
neglectful of the adage that a "rolling stone
gathers no moss," shifts his quarters contin-
ually, beating now in the Middle States, now
in the West, now at the South, or is by turns
store-keeper, farmer, agent and speculator.

Others throw themselves away by being
ready to attend to everybody's affairs but their
own. They make money at first, by strict
attention to business; begin then to aspire
after what they call "position;" get elected a
bank director, railroad director, or insurance
director; neglect their store, and find, when a
crisis like this comes, that the subordinates
to whom they have confided have proved in-
competent, and that their affairs are hopelessly
involved. Others, from the very begin-
ning, are at the beck and call of any one who
is willing to impose on their good nature.—
They never, in consequence, acquire means of
their own. Like Micawber, they are always
looking for "something to turn up;" they do
not, therefore, labor and save as they should
and they are, as might have been expected,
beggars all their lives. Another class is too
ready to despair. A breath of wind knocks
them over, and when down, they have not the
pluck to get up and try again, but lie in the
highway bemoaning and lamenting like chil-
dren, waiting for somebody to pick them up.

The methods, in fact, are infinite, by which
men throw themselves away. Hundreds do
it by endorsing for a friend; and they endorse,
not because they are ignorant of its folly,
but because they cannot say "no." Hundreds
of others throw themselves away by aspiring
to have fashionable acquaintances, to live in
fine houses, to give costly entertainments;
and of the hundreds who thus ruin them-
selves, quite one-half have no taste for such
things, but fall victims to a miserable vanity.
One man throws himself away, by yielding to
the extravagant fancies of a silly wife. An-
other throws himself away by not marrying at
all.

"In all times, but especially in times like
these, the strand of life is strewn with shat-
tered wrecks. How many of these have gone
ashore without any fault of their own? How
many have thrown themselves away? If we
could know the history of each voyager, we
should find that the number of the latter far
exceeded the number of the former; for even
in hurricanes, it is only those close to the lee
shore, who cannot claw off. Our own bad
seamanship it is that makes us too often cast-
aways."

The Swamp Lands of Michigan.

Much has been written and much been said on the subject of the Swamp Lands of our State, and still, there are but few who have any adequate idea of the magnitude and importance of the swamp land question. When we speak of six millions of acres of land, the idea of a large tract is at once suggested; but, without pausing to institute a comparison, the extent of that greatness is not comprehended. For the purpose, then, of a better comprehension of the magnitude of the swamp land interest of our State, let us bear in mind, that the State of Rhode Island contains 1,306 square miles of land—

Rhode Island	1,306
Connecticut	4,674
Delaware	2,120
District of Columbia	60

Total three States and District, 8,160 equal to 5,222,400 acres—an area several thousand acres less than the swamp lands of Michigan. According to the census of 1850, these States and District contained at that time a population as follows:

Rhode Island	147,545
Connecticut	370,792
Delaware	91,532
District of Columbia	51,687

Total of three States and Dist., 661,556
At the same time the population of Michigan was 397,654

Excess in favor of States & Dist., 263,902

By these figures it will be seen, that if the swamp lands were reclaimed, and peopled with a population of the same density of the above named States, their numbers would be about three-quarters of a million, and were that population increased to the density of the State of Massachusetts in 1850; viz: 127½ to the square mile—the number would then exceed one and a quarter millions.

Taking into consideration the area of lands, the vast population they are capable of sustaining when reclaimed—the blighting and pestilential influence they now exercise on the frontier settlements of our State—the stigma and reproach they bring upon our State from abroad—the enhancement of the taxable property of our State that would result from their drainage—what momentous importance does the question of drainage assume.

Though it is now nearly ten years since these lands were granted to our State, nothing has practically been done for their reclamation. Our last Legislature has taken the incipient steps; and among other provisions on the subject our State cabinet have been constituted a Board of Drainage Commissioners, and one hundred thousand acres of these lands have been placed at their discretionary disposal, for the purpose of commencing the work in an experimental way. It is to be hoped that an experiment will be instituted at an early day.

Unless the work is soon undertaken, one of the two official years of this Board of Drainage will be lost, and the remaining year may prove insufficient for the conduction of the enterprise. How important then that this Board should take action in the premises without unnecessary delay. Let the work be entered upon at once. But what if the first experiment should prove a failure? Try again. The amount appropriated is but "a dust in the balance," compared with the whole grant. It cost the State nothing. Let it not be doled out grudgingly, but let it be liberally, though judiciously bestowed; and if judiciously expended, the experiment will not fail.

In glancing over the map of our State for a suitable field for operation the eye falls upon a large district of country, stretching along the south shore of Lake Huron, from the mouth of the Saginaw to the head of the St. Clair, which, for a broad margin is chiefly represented as swamp land. Some of this tract lies so near the level of the lake as to be ir reclaimable; but the greater portion is rich in the natural elements of fertility, and sufficiently elevated above the level of the water to make the very choicest of grazing and grain producing land in the State. Drainage, and drainage alone is necessary; and ample and sufficient means for that drainage are now in the hands of the State.

But how shall we proceed? Let enlightened theory and efficient practice be combined, in order that the first experiment may not be condemned as a failure.

Take, for instance, a district east of Bay City, where the average breadth of those swamps is about equal to that of two surveyed townships. The annual fall of water, for an average of years, has been ascertained to be about forty two inches, producing in a township of six miles square an aggregate of 3,506,825,600 cubic feet. Suppose then that we allow one half of this quantity to be carried off into the air and earth by evaporation and absorption—the computation for one township will suffice for the breadth of two. Suppose, then, the drains are constructed three miles

apart, each drain must then be so constructed as to be capable of discharging the water that falls on half a township—that is to say, 1,753,412,800 cubic feet per annum—to render the land, in the language of the grant, "fit for cultivation." Nor should the drains be the whole year in discharging their waters. As it commonly happens that the accumulated rains and snows of more than half the year must be carried off in the brief period of a few weeks which intervene between the breaking up of winter and the spring season for plowing and seeding, these drains should be made capable of discharging the entire year's water in four months' time.

Suppose then, each ditch to be sixteen feet wide at the surface, four feet deep, and eight feet wide at the bottom; carrying out into the Bay a column of water two feet deep, at the rate of four miles an hour, the average breadth of which will consequently be ten feet. If our figures are correct, one mile of ditch will contain 105,620 cubic feet of water, and the hourly discharge would be 422,400 feet, making 10,137,600 feet in twenty-four hours, and requiring one hundred and seventy-three days to perform the office work of the year. Hence, if winter "breaks" on the first of March, and half the waterfall of the year is to be carried away into Lake Huron before spring work can be performed, it will be seen by computation that before these "Swamp Lands" are rendered "fit for cultivation" the 26th day of May will have arrived.

All practical Agriculturists will agree with me that to insure successful and profitable farming, the ground should be dried at a much earlier period. But let it be remembered that in this computation I have only estimated the average flow of water to be equal to half the depth of the drain, thereby placing the surface of the land a sufficient height above the level of the water in the drains to allow the work of agriculture and that of drainage to be carried on at the same time, an arrangement indispensable to the accomplishment of the desired object.

I am aware that when I speak of a ditch, or rather a canal sixteen feet wide, and four feet deep, I at once place my scheme in imminent danger of being pronounced extravagant; but my experience and observation of the draining process during the past twenty years has convinced me that at least three-fourths of those who undertake the work of drainage, fail on account of the inadequacy of the means employed. When we bear in mind the fact, that the falls of rain can never be equalized, but that those swamp regions are not only liable but certain to be deluged at times by heavy freshets; and when we contemplate the ruinous consequences that would result to the cultivator, should his fields be submerged during the season of cultivation, all must admit that ample drainage is the only safe reliance—and that so far as the work is undertaken by the State, its effect should not be destroyed by the adoption of a penurious policy. I have ever feared, and I now fear, that the means adopted will, through motives of economy, be left inadequate to the accomplishment of the desired object, and the undertaking be thereby prejudiced, and pronounced impracticable.

When it is understood that upon the settlers will devolve the task of cutting an indefinite number of tributary or side drains, and of keeping open the main ditches for all time to come, it should not be thought too much to expect from the State, that the leading drains should be made ample and sufficient out of the swamp land fund—for be it not forgotten, that it was for that specific purpose the lands were granted to the State.

These ideas have been crudely and hastily thrown together, with a hope that they may attract the attention of some of the readers of your paper, to the importance of this momentous subject, which has been so long neglected, and in that way exercise an influence in favor of the reclamation of those regions, which are now worthless, and worse than worthless, but which, if properly improved, may at no distant period become the most productive portions of the State.

Goodrich, May 31, 1850.

Kalamazoo Horse Show.

We see by the Kalamazoo papers that the annual meeting of the National Association for Improving the Breed of Horses, was held on Tuesday, the 7th inst., in that place. The election resulted in the unanimous choice of the old board of officers. The stockholders authorized a premium list of three thousand dollars. The exhibition will be held on the magnificent grounds of the association, in Kalamazoo, on the 11th, 12th, 13th and 14th of October. The Secretary is in correspondence with officers of different railroads in reference to the transmission of stock and passengers; some have already responded with liberal terms—others not yet heard from.

Cattle.

THE DEVONS AS A BEEF BREED.

At the great International Cattle Show at Paris, the judges on beef had specimens of each of the computing breeds roasted, so as to test the quality of each, practically, by the most natural method; and the result of their gastronomic deliberations was to award the prize for the first quality to the West Highland ox; the Devon ox, second quality; the French ox, third quality; and the English Shorthorn ox, seventh quality.

Youatt, in describing the qualities of the Devons, says of their disposition to fatten: "their next quality is their disposition to fatten, and very few rival them here. Some very satisfactory experiments have been made on this point. They do not, indeed, attain the great weight of some breeds; but in a given time, they acquire more flesh, and with less consumption of food, and their flesh is beautiful in its kind. It is of that mottled, marbled character so pleasing to the eye, and to the taste."

In a large proportion of Somersetshire, the Devons are preferred for grazing; on the untillable lands they are allowed from an acre to an acre a half each ox, and one sheep to an ox and a horse to every twenty acres added, and thus poorly kept they pay from seven shillings to two dollars per week for their keep.

The Duke of Bedford, to test the comparative feeding qualities of the Devons and the Herefords, purchased some of both breeds in April; the Devons were not in so good condition as the Herefords when turned out to grass, and cost nearly twenty-five dollars per head less, but in December when they were all sold to the butchers, the Devons were superior in fatness and in weight. This was no small triumph for the Devons, when we consider that the Herefords are the great competing rivals of the Shorthorns.

Coleman says that, "an intelligent herdsman, accustomed to fattening animals for eighteen years, estimates that the shorthorns requires one-third more food than the Herefords. A trial was made between these breeds, in England in 1828-9, in the ordinary mode of feeding, without forcing by artificial food of any description. Three Herefords weighing 2632 lbs. and three Shorthorns weighing 3024 lbs., were turned out to grass from May to November, and these stall-fed until March, when the Herefords weighed 4158 lbs., and the Shorthorns weighed 4928 lbs. The Shorthorns gained nearly 400 lbs. the most, but had consumed 12,775 lbs. more of turnips and 1714 lbs. more of hay than the Herefords. They were all then sold in Smithfield market together: the Herefords brought \$466.56 and the Shorthorns \$471.42, being only \$4.86 to pay for the immense amount of extra food, and the excess in weight of the Shorthorns over the Herefords at the beginning. Against such a breed the successful competition of the Devon was no small triumph, distancing at once both the largest beef breeds of England.

The same Noblemen, to compare the feeding capacity of the different breeds, selected six oxen, two Herefords, two Devons, one Sussex, and one Leicester, in November, and fed them till December following (13 months.) The two Herefords weighed 3949 lbs. and gained 528 lbs., consuming 423 lbs. of oil cake, 5412 lbs. of turnips and 919 lbs. of hay; the two Devons weighed 3231 lbs. and gained 882 lbs., consuming 880 lbs. of oil cake, 4724 lbs. of turnips, and 737 lbs. of hay; the Sussex weighed 1848 lbs. and gained 364 lbs., consuming 432 lbs. of oil cake, 2655 lbs. of turnips and 392 lbs. of hay; and the Leicester weighed 1750 lbs. and gained 322 lbs., consuming 439 lbs. of oil cake, 2652 lbs. of turnips and 400 lbs. of hay. The results of this trial sums up as follows: the Devons were the lightest of any at the commencement, and consumed much less food than either of the others, and yet gained more pounds in weight than any of them. And when we consider the Devons are noted above all others for laying on their flesh upon the choicest parts, and the superior quality of their beef, the superiority of the Devon becomes still more marked and important. The Devons were next tried with the Glamorgans. Two Devons and one Glamorgan were fed from January 6th till December following. One of the Devons weighed 1491 lbs. and gained 504 lbs.; the other weighed 1800 lbs. and gained 534 lbs.; the Glamorgan weighed 1540 lbs. and gained only 438 lbs., being beaten both by the lighter and the heavier Devon.

The next experiment was a trial of the grazing and stallfeeding capacity of the Devons against the Galloway Scotts. Twenty of each breed were purchased in October, and equal numbers of each subjected to the same treatment. Of these 16 of each breed were sold at different times. The sixteen Scotts cost \$594.21 and sold for \$1146.59, gaining

by feeding \$552.38; the Devons cost \$569.59 and sold for \$1215, gaining by feeding \$645.41, being \$93.03 more than the Scotts gained; but the Devons had been kept, on the average, between six and seven weeks longer than the Scotts, and for this extra time they were charged eighty-five cents per head per week, although the Scotts only gave a profit for the whole time of fifty cents per week, and for seven weeks less than the whole time they would only pay fifty-seven cents, but charging the Devons the eighty-five cents as stated, gives \$91 to be deducted from their excess of profit, still leaving the Devons a small amount more profit than the Scotts gave. The remaining four of each breed were stall fed on turnips and hay, the account standing as follows: the four Devons cost \$142.40 and sold for \$408.28, gaining by feed-\$265.88; the four Scotts cost \$148.55 and sold for \$364.50, gaining by feeding \$215.95, making a balance in favor of the Devons of \$49.83 more profit than the Scotts.

This seemed to establish the superiority of the Devons both for grazing and stall-feeding, but as the gain by the four stall-fed Devons was half as much as the sixteen Scotts gained by grazing, it was determined that another trial should be made, in which both should be fed alike both at grass and in the stall. And again in October twenty Scotts and twenty Devons were bought, and were sold at different times, but always an equal number of each at each time. The Scotts cost \$1031.05 and sold for \$1818.87 gaining by feeding \$787.82; the Devons cost \$920.72 and sold for \$1802.53, gaining by feeding \$881.81, giving a balance in favor of the Devons over the Scotts, in this second trial of \$93.99. The Scotts had previously been tried with the Pembroke and beaten them. Many other experiments were tried, and very few breeds of cattle whose relative qualities and value were not put fairly to the test. And one breed after another was abandoned, until at last both the Devons and the Herefords were retained as the two best breeds the kingdom afforded.

The Devons, in the shows of the Smithfield Club, have been more successful in carrying off prizes than any other breed, in proportion to the numbers exhibited. In one case there were but thirteen Devons competing against one hundred and seven Shorthorns and Herefords. Three of the principal prizes were carried off by the Devons, one taking the Gold Medal as the best ox in the yard of any breed: and this is but a fair example of their, almost, uniform success in similar cases, and with the best judges. Cases might be multiplied but the examples cited are sufficient.

The only objection that any one thinks of offering to this breed, is—too small. But they are small only when compared with the largest Durhams and Herefords. At the last fair of the American Institute, four Shorthorns selected and fed expressly for the show, with the announcement made a year in advance that they were to be the four best ever exhibited there, averaged less than eighty pounds live weight over the average of a pair of Devons on the ground over which there had not been a year's brag and bluster. They are a happy medium between the extremes of the largest and smallest classes of cattle, and quite large enough to be profitable feeders. As their many inestimably good qualities become more appreciated, they are increasing in importance both in Europe and in this country. Translated to this continent, the Devon retains all the excellencies which he possesses in his native climate, and will improve instead of deteriorate, and has, wherever he has become known, increased in favor from year to year, withstanding with impunity the fierce cold and terrific storms of winter throughout Canada and the northern States of our Union, and resisting equally well the burning heats, drouth, and scanty herbage of a Georgia summer; and whether on hills or in valleys, on the scanty pasture or luxuriant herbage, thriving so efficiently as always to become a favorite with its keepers: and whenever their blood has crossed the veins of our native races, producing, almost invariably, an important and permanent improvement in their qualities beyond that of any race yet tried upon them.

With all the earliness of maturity of the Shorthorn or the Hereford; making the choicest of beef at any age or season; paying well for all they consume; thriving upon coarse herbage or fodder; their endurance of a cold and changeable climate; their rapid and profitable fattening qualities; their great beauty; unrivaled working abilities; their rich milk; their constitutional healthiness and freedom from pulmonary and chronic diseases; their successful improvement of native cattle in crossing, must, all, conspire to render them one of the most important and profitable races which the farmers of Michigan can possess: and they are destined, rapidly, to win their way to general use and universal favor.

Raising and Keeping Cabbages.

A correspondent of the Boston Cultivator thus writes on the subject of cabbages:

"Cabbages are raised by almost every farmer either in large or small quantities, though many raise a very inferior article. Much has been published in the agricultural journals, telling how they should be cultivated, and how much more might be with profit, as almost every one is fond of them, either cooked or uncooked. As I have some experience in the raising of this esculent, I will act upon the suggestion, "do good and communicate," and give it to the readers of the Cultivator, hoping that it may benefit some.

"The first thing is to obtain good seeds. A good way is for every farmer to raise his own seeds and then select the largest and best for sowing.

"The proper time to sow, depends upon the variety selected, the section of country, the soil, and the weather. In this place (Pittsfield, St. Lawrence Co., N. Y.) the winter variety should be sown from the first of May to the first of June; some years they may be sown the latter part of April. The ground should be rich, and the seed should be raised a little above the surface of the ground, in order that the plants may be exposed to the air and sunshine. A large quantity of seed should be sown if only a small number of plants is desired for setting, as the young plants may be destroyed by worms and insects. Select the largest and best plants to set out. When the plants are small they are liable to be destroyed by the insects. To prevent this, I know of nothing better than to take an old barrel or tub, and fill it about half full of dung and then fill it up with water and after it has stood a few days water the plants with the liquid. This will check the ravages of the insects and make the plants grow faster.

"After the plants are large enough to set out, a piece of ground should be prepared by ploughing or spading and made very rich, and they should be set out on a cloudy day or just after a rain. The plants should be set out about the same depth in the ground that they grow, and cover them with barlock or mullen leaves when the sun shines, until they have got well rooted. After the plants are set, some will die, and others will be destroyed by insects, grubs, cutworms, and in this section a kind of maggot destroys many plants. A number of plants should be left on the seed bed to replace all that are destroyed.

"The principal difficulty in the raising of this vegetable is to get the plants to obtain a sufficient size for transplanting. After they have got well rooted all the cultivation they need is to have the ground kept loose and free from weeds. Before the ground freezes in the fall they should be gathered and placed in the cellar. They will keep fresh through the winter if the heads are not separated from the roots and the roots are placed in the ground in the cellar, as they grow. The small and lean heads will keep best if they are placed in a trench dug in some suitable place, deep enough to allow the tops of them to be below the surface of the ground. They can be set quite near together. The roots should be covered with dirt about as deep as they grew. The pit should then, be covered with boards, old rails or poles about two or three inches apart; some coarse straw should then be put on the poles to keep the dirt from falling through and then dirt should be put over the straw, enough to prevent the cabbages from freezing. In this way they will keep through the winter and be very fresh and tender when they are taken out in the spring. At least I have always found them so, and I have tried this plan several years and always with good success.

"There are a great many varieties raised. One of the best early varieties I believe to be the Winingstadt. It is a very early variety, but not very good for winter. The best soil for all kinds which I have ever raised is clay or clay and sand mixed. The soil in this town is a light sand, and cabbages do not grow very large here."

Death of a well-known Brood Mare.

A letter from C. W. Green, of Farmington, informs us that his premium brood mare Betty, and her colt sired by Stone Plover, are both dead. This mare was twenty years of age, and was the dam of fifteen colts. She was remarkably well bred, and possessed a strong amount of Messenger blood, combined with that of American Eclipse. Five of her colts—three stallions and two mares—are now owned by Mr. Green, and two others are owned in this vicinity. Four of these seven are mares and will be sent to Stone Plover this season. We regard the loss sustained by Mr. Green as very great, but these are some of the incidents which all breeders have to put up with to a greater or less degree.

The Garden & Orchard.

Transactions of the American Pomological Society.

REPORT OF THE STANDING FRUIT COMMITTEE FOR MICHIGAN.

NUMBER EIGHT.

The list of Pears on Quince Stock, recommended for an orchard of one hundred trees, is as follows:

Tyson.....	5	Duchesse d'Angouleme..	20
Rostiezer.....	5	Glout Moreau.....	5
Belle Lucrative.....	10	Beurre Diel.....	10
Stevens' Genesee.....	5	Vicar of Winkfield.....	5
Louise Bonne de Jersey.....	25	Beurre Easter.....	10

This gives a fine succession from the last of August to April. Taken as a whole, it is objectionable, from the fact that the supply of fruits is not properly distributed over the season; the winter, from November to April, a period of four months, being allowed only the produce of twenty trees; while the earlier portion of the season, embracing not more than three and a half months, is allowed eighty trees; notwithstanding this is during the height of the general fruit season. It should, however, be remarked that there exists, in the community generally, a disinclination for the cultivation of winter pears; and the list was, perhaps, so framed in compliance with this feeling. This notion has doubtless grown out of the fact that winter pears, if kept in open vessels, shrivel and become tough and worthless; while the idea has been heretofore promulgated and generally believed, that they could only be ripened by a tedious and expensive process. This dogma, however, may now be considered as exploded; as, with most varieties, it is more recently found that the ripening process can be perfected with no more difficulty than with russet apples. As the people become indoctrinated with this idea, the cultivation of winter pears may be expected to increase; until, as with the apple, the greater share of the fruit produced shall be of this season.—However this may be, it would seem highly desirable that a much larger proportion of this list should consist of winter varieties, inasmuch as we can hardly give too great a variety to the winter dessert, which, so far as fresh fruit is concerned, is mainly limited to the apple, the pear, and, possibly, to a limited extent, the grape.

The list would also be improved, at least in extent, by the addition of an earlier variety; since we have pears in cultivation that ripen, nearly, or quite, a month prior to any given therein. The probable reason why this was not done, is that we have no varieties earlier than Rostiezer, that are unquestionably successful upon this stock. Bloodgood, which ripens about the first of August, is tolerably successful, and a fruit of excellent quality. Amire Joannet, although placed on the rejected list for its small size and fleet, ing character, ripens so early as to be desirable in an orchard so large as the one contemplated; and, so far as the writer has tried it, it promises to do very well as a dwarf. By the introduction of these varieties into the list, the pear season will be made to commence from four to six weeks earlier.

The list given, so far as the choice of varieties is concerned, is, in the main, excellent.

Rostiezer, which is the earliest variety on the list, is a strong, spreading grower, and must be severely shortened, for several seasons, to establish a compact head. The fruit, though small and unattractive, is of excellent quality.

Tyson will be the next in season. With the writer, it has not done well on this stock, and it is believed to be, generally, considered as no more than tolerably successful as a dwarf. The Pomological Society do not recommend it for this stock. It is, however, difficult to fill its place and season, with anything else of known and established reputation, adapted to this stock.

Stevens' Genesee, which is next in season, was added to the rejected list at the recent session of the Pomological Society. It proves a hopeless failure in New England, and some other eastern localities. In our State it is a very tolerable fruit—in many places, excellent. It has, however, one serious drawback everywhere—a disposition to rot at the core. As a dwarf it does very well, but is not on the Society's list.

Belle Lucrative (Fondante d'Automne) will come to maturity next, about the last of September. The quality of the fruit is unexceptionable, and it is recommended by the Society for quince stocks, but some growers complain that it fails after growing well a few years.

Louise Bonne de Jersey comes next, and is well known as always reliable on this stock. It is very appropriately put down for one-fourth of the whole number.

Duchesse d'Angouleme is one of the finest growers on the quince, and, under high culti-

vation, often produces fruits of enormous size; but it is accused, by some persons, of dropping its fruits before maturity. It is a variety that should be grown only on the quince, but it can hardly be said to have established a reputation for profitability.

Beurre Diel, which will now be in season, is an excellent, late autumn fruit, well worthy of a place on the list. It is a stout grower with long, twisting shoots, and requires severe shortening for several years.

Vicar of Winkfield is a strong and beautiful grower, and appears to be eminently successful as a dwarf. It is not of the highest quality, but it has so many good points, that it can hardly be considered second to any other winter variety.

Glout Moreau is one of the best growers on the quince, and, on that account, is preferred, by many, as a stock for double working. It is a tardy bearer, and, even on the quince, it is claimed that it will not perfectly mature its fruits till it has acquired considerable age.

Beurre Easter will be the last in season, and, if it is to be the sole reliance for the late winter and spring supply, its number should be largely increased; as it will cover a space of three months when no other pear will be in season. It is liable to the charges of unprofitableness and difficulty of ripening, in some localities. Doyenne d'Alencon—a variety of similar season, is by many thought to be preferable.

T. T. LYON.

Plymouth, June 6th, 1859.

Treatment of Young Vines.

The London Cottage Gardener in reply to some questions of a subscriber in relation to vines, remarks in regard to the age for planting:

"For planting a vine, young plants are best for common purposes. If such a thing could be had, we should prefer having three or four year old vines, not from pots, but which had been planted in a border. These, taken up and carefully replanted, are less likely to send their roots deep than young vines fresh planted. Never mind about a vine or two not being long enough to reach your wire for training; place a stick, or a string, against it, and it will soon be long enough.

2. *Nipping of Side-buds.*—We presume that these are the buds along your Vine-stem, all except the terminal one, which you intend to form the main stem of the Vine, or continuation of what you have now. If, in planting, you covered any part of the stem, all the buds on that part should have been cut close off, or shoots, or suckers, will come from that part. As the buds are now breaking, whatever you wish removed should be rubbed off from their sockets by pressing your thumb, or finger, downwards on them. If you cut them off, the part will bleed profusely. Rub them off roughly and there will be no bleeding. Most people remove these buds; and though it may not be a matter of much importance, we should rather advise allowing those nicely placed at the sides to remain, more especially since you seem to have plenty of room for them. We always think that their presence, at least for two or three years after planting, gives strength and bulk to the main stem. The more the top grows, the more will the roots grow. Growth is chiefly what is wanted the first year. We think more, even, of that than concentration of energy. The side shoots help even concentration. Look at an oak tree in a park, with its wide-spreading branches, and you are sure to find a stout, firmly knit stem. Examine one of the same age in a thick wood; and though, perhaps, of nearly double the height, the stem will be small in girth in comparison. We do not grow the Vine for timber; but, at first, we must have robustness and growth, to lay the foundation for fruit-bearing. As the buds are on these young Vines, and growth of stem is desirable, leave them in the mean time. The terminal bud will take care of itself, and monopolize the chief strength. To encourage it to do so, secure it carefully from being stopped, and let every lateral on it grow a joint or two before stopping. To throw this extra strength still more into the main shoot, stop all the shoots, from these side-buds left, when from six to nine inches in length. These shoots, which form lasting spurs if desirable, will thus not hinder the free growth of the main shoot.—Their presence, at first, will not only encourage free growth, but will add to the thickness of the main stem. We are supposing that these shoots from the side-buds, can have free exposure to light. If not, they would then be more in the light of robbers than assistants and providers. If you mean to have anything below your Vines, it would not be advisable to have more than one stem to each. The side-buds, if left, should, therefore, be

stopped. If one or two were allowed to grow without being stopped, you would divide the strength of your Vine too much, and would be forced to cut the stems away afterwards. As advised, you will encourage root action at first, and add to the substance of the main trunk of the Vine. As laterals grow on the main shoot left, that will keep up rapid growth at the roots.

3. *Leaving Fruit.*—If you leave any at all, it should only be a dozen of berries or so, to prove your kinds. If you are wise, for the future you will cut back your Vines well the following year, and be content with three or four bunches then. We have sometimes taken a full crop the second year, and found the Vine required years to bring it round."

The Gooseberry Midge.

It is common to find upon the gooseberry bushes in our gardens some of the young fruit of a prematurely ripe appearance, turning red and dropping to the ground. Some years much of the fruit is lost in this way. This premature ripening of the gooseberry is caused by insects puncturing and depositing their eggs in it. We have at least two insects which thus attack the gooseberry. One of these appears to be a species of moth which I have not yet obtained in its perfect state. The other is the larva of the midge or a small two-winged fly, of the genus *Cecidomyia* and family *TRIPULIDÆ*. On examining some of these affected gooseberries early in July, their pulp was found to be putrid and infested with small maggots of a bright yellow color and oval form, their bodies divided into segments by five impressed transverse lines, and their whole appearance being closely like the larvæ of the Wheat midge, found in the ears of wheat. These completed their transformations and gave out the winged flies the latter part of the month of July. In size, number of joints to the antennæ, etc., these correspond with the *C. Rebellii* of Europe, but that is described by Macquart (*Dipteres*, vol. i. p. 162.) as having black bands upon the thorax, the abdomen blackish, &c. Hence it is evidently a much darker colored species.

The Gooseberry Midge is scarcely a tenth of an inch in length to the tips of the closed wings. It is of a pale yellow color, the thorax paler than the abdomen, and of a wax yellow hue; eyes black; antennæ blackish, of twelve joints, separated by hyaline pedicels one-third as long as the joints, which are short cylindrical with rounded ends, their length scarcely more than double their breadth; legs straw yellow, faintly tinged with dusky towards their tips; wings hyaline, faintly tinged with dusky.

It is probable that those flies which come out the latter part of July deposit a second crop of eggs in the gooseberries, or else resort to some other fruit of a similar nature, and that the larvæ which come from these eggs lie in the ground during the winter; for we do not perceive how, otherwise, there can be flies in June to deposit their eggs in the young fruit.

All fruit upon the gooseberry bushes which is found prematurely decaying and assuming a ripened appearance, and all which falls to the ground, should be gathered and thrown into the fire, to destroy the worms which the berries contain. By attention to this measure the haunts of this insect in the garden can be easily broken up, whereas if this step is neglected the evil will be liable to continue year after year. As this insect breeds equally well in the wild gooseberries, we cannot hope to exterminate it from our country. But none of these wild gooseberries should be permitted to grow in the vicinity of the garden, for from them, if near, this midge will continually be finding its way to the bushes of the cultivated gooseberry.—*Fitch's Noxious Insects.*

New Mode of Ripening Pears.

At a meeting of the Horticultural Society, H. O. Carre, Esq., Val Nord, Guernsey, communicated the results of some experiments he had made with regard to improving the flavor of various kinds of pears, by heat and light under glass. Last autumn "he placed on a broad shelf in the warmest part of a green-house, near the glass at top, various kinds of pears; and likewise some near the front sashes; the fruit was thus exposed to heat and sunlight, and the improvement in flavor, as regards some varieties, was most remarkable: the following kinds were more especially improved—*Louise Bonne de Jersey*, *Beurre d'Amalis*, *Eyewood*, *Glout Moreau*, *Winter Nelis*, and *Gansel's Bergamot*. The *Louise Bonne* was growing in a shaded situation, and the fruit in consequence was pale and comparatively watery in quality, but placed as above, it became of excellent flavor, although a little shrivelled for the loss of superabundant watery juice. The *Winter Nelis*, Mr. C. stated, was improved to a very

great degree. He intends to prosecute his experiments; and from his success last season, he is led to believe that in many parts of England, where pears do not ripen well, they may be rendered much more melting and sugary by adopting the plan of exposing them to light and heat, when gathered, than if kept in the ordinary way. The committee were of opinion that, as the subject was of great importance, Mr. Carre's plan should be made known and recommended for trial in this country."

Fresh Fruits Preserved.

Great improvements have been made of late years in the manner of preserving fruits for winter use, otherwise than in the old time way of putting them down in sugar, pound for pound. Many kinds of air-tight cans and jars have been invented for the purpose.—Among all the descriptions that have been before the public, the one known as the "Fruit Bottle," invented by T. G. Yeomans, of Walworth, N. Y., seems to be the least objectionable. It is made of glass, and of two sizes, the smaller one holding about a quart, and the larger one about two quarts.—They are thick and strong, and after filling may be closed with a cork and sealing wax. Before inserting the cork, a strong piece of twine is doubled and laid across the mouth of the bottle, in order to facilitate the extraction of the cork when desired, and without injury, thus preserving it for future use.

The directions for preparing the fruit for bottling are very similar to those employed in using other cans or jars.

Mr. Yeomans, writing to the Boston Cultivator on the subject of keeping fruits in this manner says: "It is a well understood fact that there is a rapidly increasing interest manifested in, and corresponding effort directed towards, the cultivation of fruits which are the products of our soil; and while there are disappointments to be met with in their culture, yet in regard to very many of them it is known to be true, that they are produced in largely increased quantities every succeeding year, while the increased demand and consumption fully equal the supply, so that remunerative prices are obtained, except perhaps for a short time or a few days during unfavorable weather, or an unusual supply, when there may be more than are wanted for immediate use.

"This is more especially the case with strawberries, raspberries and other small fruits, which must be disposed of daily as they mature, and are brought to market, whatever the weather or market price may be.

"These fruits in their season are considered to be the choicest, most delicate and desirable productions of our climate, and it is a matter of great importance to know how they may be preserved so as most perfectly to retain their original flavor and qualities in the most convenient, safe and economical manner so as to furnish a supply throughout the year, and at the same time secure a more uniform rate of prices for a largely increased supply which would thus become necessary.

"For the purpose of so preserving them, many forms and styles of cans and jars have been invented and introduced, some of which are certainly worthless, others with different degrees of merit and defects, and nearly all costing a price that almost precludes their general use if in other respects they would do; those of tin being worthless after one or two seasons use, as the acids which all fruits contain more or less of, will corrode the tin and destroy it, and besides, will poison the fruit.

"With a practical experience of five or six years in the use of most of the cans and jars in use, and closely observing their advantages and defects, I have been led to the conclusion, that, among all, those of glass only are valuable; and that the glass bottle with a large mouth, possesses the following advantages:

"Being glass it will not corrode, or poison the fruit: it is transparent, and the condition of the fruit can be seen at any time: it can be more easily sealed and opened than any other in use: the shape of the neck is such that the fruit comes out readily, and of such length that the contraction of the fruit in the bottle by cooling will not bring it below the neck, so that if there be a slight mold on the surface, as there will be sometimes, it can be removed with very little inconvenience from so small a surface and with very little loss: while the most important feature of the bottle is, that it has a jog in the neck which prevents the cork from being pressed in by atmospheric pressure while the fruit contracts by cooling.

"With a view to obviate the defects and objections which are manifest in the cans heretofore in use, and to furnish an article at a price below the cost of tin or any other

material fit for use, I was led to introduce this bottle last year as the *Yeomans Fruit Bottle*, and the experience of thousands who have used it the past year will award it the merits above named.

With such facilities for preserving them the prudent housewife will commence in May to put up her rhubarb for pies while it is young and tender; and continuing as fruit matures, will secure a supply of strawberries, currants, raspberries, cherries, gooseberries, blackberries, tomatoes, peaches, plums, pears, quinces, &c., &c., so that these fruits will assume a greater value and importance, both to the producer and consumer, than ever before. Almost every family in the country, at least, may secure a supply of fruits in their season, to be enjoyed out of season, the value of which few now fully appreciate.

HORTICULTURAL NOTES.

Layering.

The *Gardener's Monthly*, speaking of the disadvantages of layering by the old method of cutting the notch on the underside of the shoot, says: "A much better plan, and one which is now much in vogue with the best propagators, is to cut the tongue on the upper surface. On bending down into the soil, the tongue is then twisted on one side, and the young shoot intended to form the future plant may then be lifted up and bent towards the parent as rapidly as one pleases, without any danger of its snapping off. There is another advantage in this way of layering. It is often necessary, in the stereotyped way, to place a chip or something between the tongue to keep it open.—By this, the twisting of the tongue aside keeps it always separate from the old cut. Again, by this mode, very green and strong shoots can be operated on.—Magnolias, for instance, in June, and plants be got well rooted by fall, instead of waiting for the wood to ripen in August, when we have to wait for another year before our layer is sufficiently rooted to take from its parent."

New Strawberry.

Mr. Nelson, good authority by the way, says in Dr. McCloud's *Cotton Planter*: "A new and very promising variety has recently been raised in Kentucky, by Mr. Downer, a most skillful and reliable horticulturist. He exhibited it last summer before a committee of gentlemen of high standing in that section, (several of them being also strawberry growers,) who, after a comparison with other celebrated kinds, have pronounced this variety of superior excellency in every respect, and a 'triumph.'"

New Apple.

The *Beauty*.—Its origin is unknown further than that it was among grafts brought some fifty years ago from Hartford. It is described nowhere, so far as we can ascertain. Fruit large, roundish, a little flattened and narrowed towards the eye, and somewhat angular or ribbed. Stalk three quarters to an inch long, set in an irregular basin of nearly the same depth. Calyx closed in a shallow, plaited basin. Skin fair, smooth, yellow, striped, blotched, and dotted with bright red.—Stalk cavity green. Flesh tender, exceedingly juicy, with very little flavor, what flavor there is is agreeable. The apple is a very showy one and a first rate market fruit. The trees prolific beyond account, and as fruitful one year as another. It keeps till June.—*Homestead.*

The Mountain Seedling Gooseberry.

The *Gardener's Monthly* says of the Mountain Seedling Gooseberry: "The bush is a rampant grower, a monstrous bearer, perfectly hardy, and the large fruit never mildews. In quality the fruit is surpassed by some of the best English varieties."

Beurre Auguste.

Benoist Pear, according to the *Revue Horticole*, is a chance seedling discovered growing in a hedge in France. It was introduced to England in 1848, and is thus described:

The fruit is of the first size, and even in outline; skin pale yellowish green, overspread with numerous grey specks, and flakes of cinnamon russet near the stalk and apex; and tinged with rich brownish red on the side exposed to the sun; altogether a very handsome fruit; stalk three-fourths of an inch long, stout, and inserted without much depression; eye small, and slightly sunk in a narrow cavity.

Salt for Plum Trees.

J. M. Ives says, in the *New England Farmer*:—In February of 1845, I applied to one acre five hogsheads, and for the two following seasons my trees produced greatly, particularly the Green Gage; I had at that time upwards of twenty-five varieties of the plum. Previous to this my fruit was badly stung by the curculio. I could not, however, perceive that the salt had any effect upon the black wart, which has since destroyed nearly all the plum trees in this section; my fruit was most satisfactorily preserved for two years from the curculio. A friend from a neighboring city on a visit to my place while the salt lay upon the surface, on his return home applied brine to a few trees, which killed them outright; salt as well as guano must be used in a proper manner; crude salt or brine must not come in close proximity to the roots; it should be applied to the surface of the ground early in the spring, to the extent or spread of the branches, and remain upon the surface some two or three weeks before spading in.—The plum is naturally a marine tree, and it is surprising how much salt it will assimilate and thrive upon.

A New and Hardy Fumaria.

Called *Corydalis speciosa*, is mentioned as having been introduced to the St. Petersburg garden from the River Amour by a traveller named Maximov. It is reported by M. Regel to be as handsome as *Corydalis nobilis*, and since it seeds freely, it will soon be common. The stem is described as being 1½ feet high, red. The flowers are golden yellow in bunches at the end of the stem and branches.—*Gardener's Monthly.*

FOREIGN AGRICULTURE.

A Lecture on the Breeding of Horses.

MR. GRIFFITH EVANS, VETERINARY SURGEON, ENGLAND.

The lecturer began by contrasting the present Shropshire sheep with their ancestors thirty years ago, and he showed how that the great improvement had been made by breeding upon scientific principles. Yet he was persuaded that many follow the new system who are not acquainted with the principles. They do it because it is the fashion, and answers the purpose better—not knowing the why and the wherefore it should answer better. He should therefore draw their attention to Nature's laws of breeding. The same law is applicable to all animals only, of course, requiring certain modifications which their good sense might easily direct. It is a lamentable fact that horse-breeding is very much neglected throughout the country, especially hunters and carriage horses; nor has the draught horse had the attention he deserves. He (Mr. Evans) should, therefore, more especially point out to apply the principles of breeding in horses than to other animals. Mr. Robert Smith, in his excellent "Report on the Exhibition of Live Stock at Chester," published in the last volume of the *Royal Agricultural Society's Journal*, says that "The breeding of the horse is a national subject, but as yet had not been treated as such. There is a want of system in our arrangement and management." He quite agreed with Mr. Smith. Our fairs are overstocked with horses, but so shapeless that it is difficult to say for what purpose the most of them are adapted. He thought he might safely say that the average value of four-fifths of our four-year-old horses, of all sorts that we see in the fairs, is hardly £20 to £25, and it is difficult to sell many of them at any price. Now, taking into consideration their cost of breeding and rearing, with all the risks and so on, no wonder, then, that breeders say they do not pay. The average value of the remaining one-fifth it is difficult to say; but they sell readily for from £40 up to almost any amount you can reasonably conceive. Now, I ask those breeders who complain, why do they breed horses at all? "Oh," they say, "to consume the grass properly we must have cattle, sheep, and horses too—they all differ in their bite so." Very well, then, if you breed horses of some sort, why won't you breed good ones? Does an ill-shaped horse consume less food than a good one? Is it cheaper to breed poor than good horses? My motto is this always: "If it is worth my while to do a thing at all, it is worth my while to do it as well as I possibly can;" and I have no hesitation at all in saying that it would pay you as well as anything to breed real good horses. Some of you may perhaps say, as I have heard others say, that in breeding cattle and sheep you are seldom disappointed; the progeny is always what you expected; while in breeding horses you have no idea what the color or shape of the colt will be until you see it, it is quite a lottery. It may be this; it may be that. You hope the best, and the worst will not disappoint you; for you do not believe in horse-flesh. Thank you, my dear friend, that is a candid confession at any rate, which goes so far as to prove that you have never practiced horse-breeding upon right principles. Before I came here I lived in Lincolnshire. There, good horses are comparatively plentiful; much better than those bred in Shropshire, taking all together. You excel in sheep; I wish you to excel in horses too. I wish to see dealers flocking from all parts of the world to Shropshire for horses. I wish to see the tide turned from Lincoln and Hornsea fairs to Shrewsbury and Bridgnorth; or, at any rate, to see the trade as strong here as there. It is not impossible; the country is naturally well adapted for breeding purposes; you only want the system. Don't despair; a patient perseverance will overcome all difficulties. Let us all then, this evening, enter into the subject in good earnest, determined to sift the matter thoroughly, and to profit by the investigation. He went on to notice that the first great law of nature in breeding is, that like should produce like; if it was not for this law, which is constant without exception, a mare might produce a calf, a sow produce a dog, a bitch produce a lamb, &c.; but it must be accompanied in our mind with another law, the law of variation. The child is not always like its parent in every respect, and sometimes not like its species, as when a lamb has two heads or six legs, &c., as we often find. Then we call it a monster. This diversity forms the problem of hereditary influence, and it is for the causes of, and reasons for, the variation that the breeder must enquire, and make himself acquainted with, so that he may, as far as possible, modify them. One of these causes of variation is what is called "breeding back." It is often a source of disappointment to the breeder that when he puts a well-formed female and a well-formed male, he gets an ill-formed colt or calf, and of quite a different color to what he expected. If you enquire into the pedigree of the parents you

will find the child answering in every respect to the description of an ancestor. This is the law of atavism. It is this that makes many say that horse-breeding is a lottery. However, if you breed properly you have little to fear. Pure and thorough-bred animals comparatively seldom breed back, or, however, disappoint their owners in doing so. By thorough-bred is meant those whose ancestors were for a long time of the same shape, and adapted for the same purpose as themselves. The more the animals have been crossed the more subject are they to breed back, and more the difference of shape in crossing the more likely is breeding back to prove a disappointment. A case was related to illustrate this law. How is it to be explained? The "Westminster Review" very properly says, "It is to be explained on the supposition that the qualities were transmitted from the grandfather to the father (the other sex may convey it equally well), in whom they remain latent or were marked by the presence of some antagonistic on controlling influence, and thence transmitted to the son, in whom the antagonistic influence being withdrawn they manifest themselves. Mr. Singer, let us say, has a remarkable aptitude for music, but the influence of Mrs. Singer is such that the children, inheriting her imperfect ear, manifest no musical talent whatever. These children, however, have inherited the disposition of their father in spite of its non-manifestation; and if, when they transmit what in them is latent, the influence of their wives is favorable, the grandchildren may turn out musically gifted. In the same way consumption or insanity and other hereditary diseases seem to lie dormant for a generation or more, and in the next flashes out with the same fury as of old." This should make you very careful in breeding stock, and to ascertain that not only the sire and dam are free from spavin, curbs, &c., but that their ancestors were not subject to any hereditary affection, and not only that they were free from hereditary evils, but that they possess the same good qualities, and are adapted for the same purpose as themselves. Several very beautiful, instructive, and interesting illustrations were produced to prove that diseases arising from accident, as well as constitutional idiosyncrasy, curious tricks, acquired habits, vicious and peevish tempers, as well as good tempers, &c., were hereditary or transmissible from parent to offspring. Now comes the vexed question, "Which has the predominating influence on the progeny, the male or female parent? If both parents join to form the child, does not one parent give one group of organs, and the other parent another group; or do both give all? This subject is so very interesting, and it is so important, that the breeder should come to some definite conclusion upon it, that he felt justified in occupying a considerable part of their time in its investigation. Several great men were mentioned who maintain that the male parent furnishes the external configuration, or, in other words, the locomotive organs; while the female parent gives the internal or vital organs, each absolutely independent of the other. Other equally celebrated observers declare that it is quite the reverse, the female preponderates always in the locomotive organs, and the male in the vital organs. Others again, equally as eminent, assert that both theories are wrong; that the male always gives external configuration or locomotive organs, and the female the internal or vital organs, but do not mean it to be inferred that either parent gives either set of organs uninfluenced by the other parent, but merely that the leading characteristics and qualities of both sets of qualities are due to the male on the one side and to the female on the other, the opposite parent modifying them only. He (Mr. Evans) believed they were all wrong—that the truth lies between them. He related many very beautiful and interesting facts in support of each theory, which seemed conclusive in themselves; but he maintained it was not fair to look at one set of facts alone, and shut our eyes to others. It was by an impartial survey of them all that we get the truth. There was an able article upon this subject in the *Westminster Review*, with which he fully agreed, which says "That both parents are always represented in the offspring; and although the male influence is sometimes seen to predominate in one direction, and the female influence in another, yet this direction is by no means constant, is often reversed, and admits of no absolute reduction to a known formula. We cannot say absolutely, the male gives such organs. We cannot even say the male always predominates in such or such a direction. Both give all organs. Sometimes one predominates, sometimes the other. In one family we see children resembling the father, children resembling the mother, children resembling both." He (Mr. Evans) knew many breeders who had suffered great disappointments and losses by practicing upon the theory that the female does not give the external configuration, nor has any part in the locomotive organs. One of the greatest curses in horse breeding is that there are but few good blood mares kept. He had no hesitation in saying that, as a general rule, and

the only safe one to go by, the female has as much influence on the configuration of the progeny as the male has. The successful breeder never uses a middling female to breed from, trusting to the excellence of the male to make amends. If he has not a good female he will not attempt to breed. Seeing, then, that there is a diversity, that sometimes the influence of the male parent predominates, and sometimes the female, in each system of organs, let us inquire into the causes. Several illustrations were brought forward to prove that it depended upon potency of race, upon the vigor, health, and age of the parents at the time of copulation. The most potent or vigorous parent will have the greatest influence upon the offspring. The lecturer said, I shall now pass on to notice more particularly the practical application of these laws.

(To be continued.)

Progress of Woollen Manufactures, and Growth of Wool in Great Britain.

FROM THE LONDON FARMER'S MAGAZINE.

Early last year we called attention to the increased production of wool, home and foreign, and examined in detail some of the generally received estimates of the annual produce of British wool. The subject is of itself so important, and the difficulties in arriving with any precision at the full particulars are so great, that we are always glad to find the subject occupying the attention of men capable of arriving at a sound judgment. The last number of the "Quarterly Journal of the Statistical Society" contains a very important paper "On the Woollen Manufacture of England," as read to the British Association for the Advancement of Science, last year at Leeds. Mr. Baines is so competent an authority, from the facilities of investigation he possesses in Leeds, the ancient seat of this great branch of manufacturing industry, that we are induced to examine closely his details, and to furnish an abstract of the very important statistics and deductions he arrives at. Largely as the cotton manufacture has increased, the woollen manufacture approximates more closely to it in aggregate value than is generally supposed. The processes through which wool has to pass are greatly more numerous than those required by any other textile manufacture; and they are performed by a much greater variety of machines and of work people.

Another fact which retards the advance of the woollen as compared with other textile manufactures, is the higher price of the raw material. The average value of the sheep's wool imported in the three years ending with 1856 was 1s 4d per lb., and the average price of English wool in the same years about 1s 2d per lb.; but during those three years the average price of cotton wool imported was only 5d per lb., and that of flax only 5d per lb. So that wool is about three times the market price of the two vegetable substances which form the raw materials of the cotton and the linen manufactures. Nor can sheep's wool be augmented in quantity so rapidly as raw materials which merely require the cultivation of the soil. The fleece, at least in this country, forms only a small proportion of the value of the sheep on which it grows, and the sheep farmer is more dependent on the demand for his mutton than on the demand for his wool. Now the consumption of animal food only increases, as a general rule, with the increase of population; and hence there is a natural restriction on the supply of sheep's wool, owing to which restriction the price is kept high.

The largest supply of the raw material is from the United Kingdom; but nearly half the domestic wool is consumed in the worsted manufacture, and the other half is used for the lower kinds of woollen goods. Within living memory, Yorkshire cloth was made exclusively of English wool, though Spanish wool has been used for more than two centuries for the finer cloths of the West of England.

The cloth of the present day is immensely superior, both in fabric and in finish, to the cloth of half a century back. Working men now wear finer cloth than gentlemen wore then. In the last half of the eighteenth century, the import of foreign wool fluctuated from a little under to a little over two million pounds weight a year; but last year the quantity of foreign and colonial wool imported was 124,528,000 lbs., of which about 98,000,000 lbs. was retained for home consumption. The changes which have taken place in the sources of supply during the century are remarkable. While in 1800 to 1810 we received 6,000,000 lbs. annually from Spain, now we do not get half a million pounds a year from thence. Of German wool, we scarcely received any in the beginning of the century; twenty-five years ago we received the largest proportion of our foreign supplies from thence,

about 26,000,000 lbs.; but now India and our colonies contribute the great bulk of our foreign supplies.

Though a large part of the raw material is grown at home, we have absolutely no reliable statistics of the amount of this famous product of the British Isles. The judgment of those even engaged in the trade varies very widely. The late Mr. John Luccock—a wool merchant of Leeds, and a careful enquirer—in a work published by him in 1800, "On the Nature and Properties of Wool," estimated the number of sheep in England and Wales at 26,147,763, and the quantity of wool produced annually at 94,376,640 lbs. weight. The late Mr. James Hubbard revised this estimate in 1828 for a committee of the House of Lords, with the aid of Sir George Goodman, both of those gentlemen being wool merchants in Leeds, and they raised the quantity of wool to 111,160,560 lbs. Professor Low, in his able work "On the Domesticated Animals of the British Islands," published in 1845, estimates the number of sheep in the British Islands at 35,000,000, and the produce of wool at 157,500,000 lbs. Mr. T. Southey, wool-broker, in a little work published in 1856, judging from the information he received from wool merchants in Leeds, Bradford, and other places, raised the estimate to 228,950,000 lbs.; and then, by an unreliable mode of calculation, even carried it to the enormous figure of 275,000,000 lbs. weight.

The balance of authority, Mr. Baines states, disposes him to conclude that the annual produce of domestic wool must be between 150,000,000 and 200,000,000 lbs. We believe, from our own investigations, it comes fully up to the latter figure. If we take, however, the medium, viz., 175,000,000 lbs., at 3s 3d per lb., which is about the average price of the last thirty years, the value of this great raw material produced at home will be £10,937,500. The exports of English wool, both in the raw state and in the first stage of consumption, namely, yarn, are great, and rapidly increasing. In 1857, the exports were 15,000,000 lbs. of raw wool, and 24,654,000 lbs. of yarn; and the total value of the woollen and worsted exports in that year was £13,645,000.

According to the estimates of Mr. Baines, which are by no means overrated, it would appear that the following is about the annual value of the woollen manufacture of the kingdom, separated from the worsted manufacture: The raw material used consists of 76,000,000 lbs. of foreign and colonial wool, valued at £4,717,492; 80,000,000 lbs. of British wool, at 1s 3d per lb., £5,000,000; 30,000,000 lbs. of shoddy or soft materials, such as stockings, flannels, &c., torn up to be re-worked, at 2s, per lb., and 15,000,000 lbs. of mungo, the shreds and rags of woollen cloth, at 4d per lb.—together £69,370; cotton and other warps used in the union and mixed cloths, £206,537; dyestuffs, oil and soap £1,500,000; wages—150,000 work people, at 12s 6d per week, £4,875,000; rent, wear and tear of machinery, repairs, coal, interest on capital, and profit 20 per cent. on above, £3,391,680; which gives a total of £20,290,079 for woollen manufacture.

The worsted manufacture consumes 80,000,000 lbs. of British wool, and 15,000,000 lbs. of foreign and colonial wool, and employs 125,000 hands, making in all 275,000 operatives engaged on wool. The total number of persons directly dependent upon these may be set down at 837,500 (including the workmen,) there being a larger number of dependent workers in auxiliary trades than in connection with any other manufacture.

These details will serve in some degree to point out the real magnitude and value of the woollen manufactures, which have hitherto been most imperfectly known. They have hitherto either been most ridiculously exaggerated or woefully underrated. Let no one hereafter despise wool in a pastoral country like Great Britain, and whose colonies now produce immense supplies; which supplies are advancing in a most remarkable and satisfactory rate. We know the amount of manufactured goods exported, but we have no guide to the amount consumed by our own large and flourishing population in these islands. This some of our most experienced merchants, however, estimate to be three-fourths of the whole manufacture.

Kicking Cows.

I had a heifer that kicked badly, but I cured her by the following method: Take up the right fore foot, doubling the knees as closely as possible. Then slip a strap over the knee and put a short stick through the hollow of the joint below the strap to prevent it slipping off. When having the use of but three legs, she has enough to do to stand without kicking.—C. W. A., in *Co. Gent.*

FARM MISCELLANEA.

Plowing Match and Sheep Shearing Festival.

The Plowing Match and Sheep Shearing Festival of the Northern Lenawee County Agricultural Society took place as appointed, at Clinton, on the 9th inst.

The following are the entries and premiums, as reported by the *Adrian Watchtower*: 1st. B. J. Bidwell's team; John Warner, plowman.

2d. Walter Wimple's team, an iron beam plow; George Taylor, plowman.

3d. A. D. Hall's team, plow like the last, Mr. Hall himself the plowman.

4th. Henry Keyser's team and himself the plowman.

5th. George Wilson's team, Harvey Burch, plowman, with a Delano sub-soil plow.

6th. Wm. Hair's team, George Price, plowman, with a Curtis iron beam plow.

The teams were composed of large muscular horses, except the 5th pair, which were rather less than medium size, and all did their work without any fuss, and seemed to be well trained to obedience.

The ground marked out for each to plow, was a strip two rods wide and thirty rods long—one-fourth of an acre; the soil, a sandy loam, containing now and then a boulder. The rule required that each should turn three back furrows to mark out the lands, after which each went around his own land, and was allowed ninety minutes in which to complete the one-fourth acre. The work was done by the 1st in 63, the 2d in 62½, the 3d in 63, the 4th in 52, the 5th in 55d, and the 6th in 63 minutes. All the work received high commendation from the assembled multitude, who watched the entire proceedings with much interest.

W. V. Wimple, Lot No. 2, 1st Premium..... \$5 00
John Warner " " 1, 2d " " " 5 00
A. D. Hall " " 3, 3d " " " 4 00
Henry Keyser " " 4, 4th " " " 3 00
Geo. W. Wilson " " 5, 5th " " " 2 00
George Price " " 6, " " " " 2 00

In this last case the Committee decided that the plowing was not of the requisite depth, consequently they could not award a premium. They deemed it equal to a portion of those to whom a premium had been awarded, and not equal to the other portion. They have, however, recommended the Executive Committee of the Society to award a premium of the fifth grade.

At 2 o'clock P. M. the sheep shearing was to have commenced, but we had only time to witness the preparations for it and look at the sheep in waiting for the shears. For an account of it we are indebted to Mr. Chandler, as follows:

The following entries were made for the premium on the fleece, viz:

Thos. L. Spafford, 3 Spanish bucks.

A. J. Hunter, 1 Spanish buck, 1 Spanish ewe, and 1 French ewe.

Rensselaer Mills, 3 Spanish sheep.

Henry Larzelere, 1 Spanish sheep.

The following individuals entered their names as sheep shearers, to which are appended the length of time in shearing and the premiums awarded:

No. 1, Geo. Price, 20 min. 30 sec. awarded 2d prem. \$4 00
" 2, R. Corbett, 20 " " 1st " 5 00
" 3, A. D. Hall, 16 " " 3d " 3 00
" 4, J. C. Eddy, 21 " " 4th " 2 00
" 5, W. Gillett, 34 " " 5th " 1 00
" 6, J. M. Kinney, 15 " " 6th " 1 00
" 7, Wm. Ruby, 35 " " 7th " 1 00
" 8, C. Canfield, 17 " " 8th " 1 00

Endurance of Horses.

Some curious experiments have been made at the veterinary school at Alfort (just outside of Paris), by order of the Minister of War, to ascertain the endurance of horses, as in a besieged town for example. It appears that a horse will live on water five-and-twenty days: seventeen days without eating and drinking; only five days if fed but unwatered; ten days if fed and insufficiently watered. A horse kept without water for three days drank 104lb. of water in three minutes. It was found, too, that a horse taken immediately after "feed," and kept in the active exercise of the "squadron school," completely digested its "feed" in three hours; in the same time in the conscript's school its food was two thirds digested; and if kept perfectly quiet in the stable its digestion was scarcely commenced in three hours.—*Phil. Press.*

Prevention of Bee Moths.

Amos Fish of Albany in the *Country Gentleman* suggests that about four or five days after bees have swarmed, say about the 15th of June or about fifteen days after they should have swarmed, in the middle of a clear warm day, when the thermometer indicates 90° or more, the bee-keeper should put on his thick over clothing, vest, mittens &c., and then turn the hive at an angle of 45 degrees, and break out the brood comb, one piece at a time, and pass it to an assistant to brush off the bees, who places it on a large tray, on which slats have been put. The comb is then carried to a dark room, with an aperture in one of the windows through which the bees can pass which may still cling to the comb. The hive is replaced in its original condition, and the next day the bees will be found vigorously at work building new comb. The brood comb being taken out the moth has no place to harbor, and as they become black and filthy they should be removed at the farthest every second year.

STATE FAIRS FOR 1859.

Illinois, Freeport, Sept. 5-9.
Vermont, Burlington, Sept. 13-14.
Kentucky, Lexington, Sept. 18-17.
Ohio, Zanesville, Sept. 20-23.
Indiana, New Albany, Sept. 26-30.
Iowa, Oskaloosa, Sept. 27-30.
Canada West, Kingston, Sept. 27-30.
Michigan, Detroit, Oct. 4-7.
Maine, Augusta, Sept. 18-16.
New York, Albany, Oct. 4-7.

COUNTY FAIRS FOR 1859.

Macomb, Utica, Oct. 19-21, John Wright, Sec'y.
Lenawee, Adrian, Oct. 5, 6, A. Howell, Sec'y.
Northern Lenawee, Tecumseh, Sept. 21, 22.
Oakland, Pontiac, Oct. 12, 13, M. W. Kelsey, Sec'y.
St. Joseph, Centerville, Sept. 25-30, D. Oakes, Sec'y.
Genesee, Flint, Sept. 23, 24, T. H. Rankin, Sec'y.
Allegan, Allegan, Sept. 23, 24, H. S. Higginbotham, Sec'y.
Jackson, Jackson, Sept. 23-30, D. Upton, Sec'y.
Kent, Grand Rapids, Sept. 23-30.

MICHIGAN FARMER.

R. F. JOHNSTONE, EDITOR.

SATURDAY, JUNE 18, 1859.

The Late Frosts and their Effects.

We have watched with some impatience for the accounts of the effects of the late frosts, and especially for that of the night of Friday the 10th instant. As yet we have not seen any report that gives a correct idea of the amount of damage done in some portions of the State, and we think this is owing somewhat to the fact that its full effect could hardly be ascertained for the first two or three days, especially upon the grain crops. During the past week, we have watched the crop, especially the wheat, with some anxiety, for on a close examination of much of the wheat in the vicinity of Lansing, we found that the straw was damaged by the frost at the upper joint where the spike issues from the culm. Having occasion to visit Williamstown on Monday last, on business, we examined nearly every field of wheat, rye and winter barley on the route. Some of the fields presented a standing crop in appearance, equal to thirty-five to forty bushels per acre. In all of these fields, without exception, the wheat had more or less assumed already a yellow tinge as if it were preparing to get ripe. The appearance was not natural to it, as the plant was only preparing to flower. On pulling heads in various parts of these fields, the lower part of the stem of the spike was found paler and perceptibly shriveled, showing that the supply of nutriment had been cut off. One very intelligent man showed us a magnificent field of eleven acres, from which he said he felt satisfied he could not get any return except the straw. The rye which was more forward than the wheat has suffered even worse. One or two fields of winter barley seem not so badly affected.

South of Lansing towards the line of Jackson county, reports reach us of still further and worse ravages. We learn from that quarter that whole fields of rye and wheat are unquestionably dead, and the verdict rendered is killed by the frost. Both merchants and farmers wear very despondent faces, and look at their lately luxurious and promising fields with much dismay.

The grain crops on the farm of the Agricultural College have suffered in this respect as well as the rest in this locality. We have here four kinds of winter wheat growing, namely, the Mediterranean, the Soule, the Australian and the Tuscany. A portion of the Mediterranean, and all the Soule are grown on a new fallow, surrounded on all sides by a dense forest; an examination of this field on Tuesday morning last, showed that a large portion of it had changed color, and a suspicious yellow tinge had become prevalent over a great part of it. The examination of many of the stems showed that the straw of the flower spike was shriveled, and when pulled from its sheath, either close to the joint, or about an inch above it, the straw was shrunk and of a dead, light yellow tinge, and not full, round and healthy. The crop on this field is not at the present moment promising, and though we do not like to yet say it is entirely destroyed, at the present moment appearances are against its proving of much value for its yield of grain. The location does not seem to have protected it, and the newness of the fallow seems to have rendered the crop rather more susceptible to the influence of the frost than the wheat that was on plowed land.

The Australian, Tuscany and Mediterranean on the corn ground of last year, were not quite so forward, and seem to have stood the effects of the frost better, though in many places they too show the "suspicious yellow" tinge. The stem of the spike seems to be affected more or less, when pulled out of its sheath and examined, but as yet though showing shriveled slightly, the stem itself

has not yet begun to shrink, and perhaps the growing weather which has prevailed since the frost may cause it to recover. On some low spots on the oat fields, the crop looks as though it had been passed over by fire, and the frost seems to have penetrated so far as to have killed the oat plant, root and sprout, on these places. In a field of twenty acres, there are probably two to three acres that are as yellow and withered as a straw stack of two years' standing. These oats were from six to ten inches high. Over other oat fields there has been a general nipping of the leaf, but we think not enough to do a serious damage to this crop.

On Friday afternoon, there was along the plank road, and in front of the College building, as good a field of corn as could be found in this State. It had been already once cut to the ground by the frosts of the 4th and 5th instant, but it had recovered, and thrown out a most vigorous set of new leaves—broad, dark and rampant, it stood upon the ground in all the glory that is supposed to be peculiar to "Young America." It had just undergone its second hoeing, and was from six to ten inches in height. On Saturday morning after the sun had been up for three hours, no man would know that a hill of corn was to be found in the whole forty acres. It lay so flat, brown and apparently dead. On the light sand, and in the marshy tracts it was cut off by the roots, in the other portions of the field it has begun to come forward again, and the rows can now be distinguished.

The crops of early potatoes are cut down and black. They are not dead, as a new growth is already beginning to show, but this crop has had a narrow escape. As for garden crops, they have mostly succumbed. The tomatoes were saved by having pots enough to turn over all the plants set out, but the vines of the squash, melons, cucumbers, which had had a light covering of hay thrown over them, were cut down notwithstanding the attempt to protect, and though the same amount of protection had availed the week previous, and saved them all.

The College Farm is pretty much in the condition of all the farms on the timbered lands of this neighborhood, and also of most farms throughout the State, it depends greatly on its success in raising crops. It is not provided with grass land in any kind of proportion to its crops on the ground, it has no live stock, and no conveniences for rearing, feeding or fattening them, so that the loss of a grain crop in this manner is a serious disturbance to its economical arrangements. It has not yet had time to get its grass lands ready. Some are now seeded which will come into use next year. To remedy as much as possible this loss, which on a well arranged and thorough stocked farm, should hardly be felt, every effort has been made to get a large breadth of ground ready for root crops. The rich interval land along the river bank, which was covered with fallen timber, logs, and the general debris, not only of its own growth, but also what the rise of spring freshets had left when the river overflowed its banks, has been cleared, plowed, and got ready for roots, with the design of making up in beef, mutton and pork, what ever loss may have been sustained by the damage of any portion or the whole of the wheat crop. Wherever the corn has been killed out, so that it is dead, it has already been replanted. The pumpkins, of course, have been killed. New seed has already been put in the third hills of every third row. Fortunately, enough of good seed was on hand ready for such an emergency, and which had been procured with the original design of having enough to meet casualties. Meanwhile having taken every available precaution to get over this "set back," we shall watch the future development of the wheat crop in this vicinity, with a good deal of interest.

Worms in Hay—Information Wanted.

Enclosed please find some worms which I found in great quantities at the bottom of my hay mow. The hay is principally clover. I found the worms about two feet from the ground, working in the hay. I drew a load of hay to my barn, and there are large quantities of worms on the floor now. The worms make a web similar to a spider web, and they are from $\frac{1}{2}$ to $\frac{1}{4}$ inch long. Can you or some of your subscribers give me and the public information in regard to them. I have inquired of our farmers and they say they never heard of worms working in hay before.

C. S. KIMBERLY.

Corunna, June 8th 1859.

[The worms were dead when they reached us, and one was crushed and shapeless. The other we have sent to Dr. Goadby at the Agricultural College for microscopic examination, and will publish the result as soon as we hear from him.]

The Crops and the Markets.

The late arrivals from England report no improvement in the prices of breadstuffs, but that there is a decline in the principal markets, and that the crops on that side of the Atlantic are most promising. Our own markets show some more firmness since the accounts of the damages of the frosts. But as yet the full extent of the injury done by the last frost in this State is not known. Again, fall crops are already secured in Southern Illinois, Missouri, Kentucky and Tennessee, as well as in other Southern States; much of which is already being got ready for market. This will have its effect in keeping down prices until the whole of the crop throughout the Northern States is secured, and at present it does not seem as though there could be much doubt but that holders will have to accept of lower rates than have yet prevailed throughout the past six months.

We note that wool is mostly quoted as dull of sale, that buyers are not anxious to purchase at present rates, but prefer waiting until their necessities compel them to go into market to buy the raw material. Whenever these reports prevail during the wool season, let those who have grown the wool be very cautious about pressing their clip on the market. Unless necessity actually compels that money should be secured by the sale of wool, wait till these reports have subsided. It is very true that this season the wool dealer is guided by a very different state of affairs from what prevailed last year. The effect of the war fever throughout Europe is unquestionably about to turn out, for this season at least, rather injurious to our wool growers, and even now is having that effect on the trade. First, it is claimed that the war is causing the withdrawal of a large amount of money from this side of the Atlantic, for the payment of debts due, thus rendering the price of money higher, and of course there is less to be invested in the purchase of wool. Second. The importations of goods for this year, up to this time, have been nearly double what they were last year, thus crowding out our own manufactures. Third. The war fever has in some degree diverted the attention of the people in the manufacturing countries, and has not made such a demand for foreign wools, which are now being brought into the American markets at very low rates, and enabling the manufacturer to procure a supply at prices that forbid him from patronizing the home grown wool. These elements are all at work just now, and it is impossible to say to what extent they will affect the whole trade; and what will be the consequences that will ensue to the present wool clip. It is well known that the production of wool does not by any means reach the wants of the country, but there are so many sources of supply, especially of manufactured goods from all quarters, and when to this is added the supply of foreign wool thrown into our markets because it is not wanted by manufacturers who have hitherto wanted, but are at the time overstocked with goods, that it must be admitted that the wool growers have not as good prospects before them as there were some time since. Still they are not unfavorable, and we think they cannot make them worse by not being impatient to sell. Our quotations will advise our readers of the prices now prevalent in the several markets.

Swamp Lands.

We commend to attentive perusal the valuable suggestions on the treatment of the swamp lands, which will be found in another column of this paper. In adopting any measure which is intended to drain the swamp land, the whole extent of each tract, and its connections with other tracts adjacent should be taken into the survey, and all channels should be made of such size and permanency as will ensure the end aimed at. A mere temporary scheme of drainage for any section would be of no value either to the lands to be improved, and would certainly be disastrous to those who might purchase them in good faith that they were healthy and available for purposes of cultivation.

New Wheat and Flour.

New wheat, and flour made from wheat of this year's crop, was sold in the New York market, on the 26th of May; the wheat brought \$2.50 per bushel. Both articles came from Georgia. These arrivals though of no importance commercially, indicate the extent of the country that is now supplying the New York market with grain, and also illustrate that the mercantile world do not now have to wait till July for a supply of the new crop. New wheat and flour has also arrived at St. Louis from Tennessee, and been sold in that market.

Trial of Mowers.

As a large number of machines are to be purchased the coming season, and wishing that all may have an opportunity to decide upon the merits of different machines, the farmers of Plymouth and vicinity, agents and all interested in "Mowing Machines" are invited by Hon. J. Shearer to meet at his farm one-half mile west of Plymouth Village, for a trial of mowers, on Saturday, June 25th, at one o'clock P. M.

The following persons have been elected for a viewing committee, and are requested to be in attendance:

CALVIN, WHEELER, of Salem; WINFIELD SCOTT, of Plymouth; HUGH BROWN, of Livonia; ABRAHAM FISHER, of Redford; IRA M. HOUGH, of Canton.

To add interest to the occasion, breeders of improved stock are requested to have some of their choicest animals on exhibition.

Done by order of committee.

Challenge Answered.

My attention has this moment been called to an article in the MICHIGAN FARMER under date of June 11th, headed "Patent Churns—A Premium Offered," to which I propose to respond at once.

The article or communication in question is signed, M. Heydenburk, Kalamazoo, whose remarks about churns, (the FARMER says Editorially) "are well worthy of note."

Now Mr. H. offers a premium of \$10, for a churn that will answer the following description viz:

1. It must be so simple in its construction and so convenient that it will be adapted to general use.

2. It must make from new or sweet milk as much butter, and of as good quality, as can be made from the cream of the same milk, and do it with as little labor as would be required to churn the same cream in the old fashioned dash churn.

The premium offered is claimed and demanded by me as the representative in the North West of "Johnson's Improved Churn," Patented Sept. 14, 1858, now on exhibition and for sale with State, County and Town rights, at No. 5, Russell House block, Detroit, where the merits of said churn are tested daily, in a public manner, at 3 and 5 o'clock P. M.; and where any Committee of the Kalamazoo Agricultural Society, and all others interested in butter making, will be gladly received, as well as entertained and astonished. We do more than is required by Mr. H.

First quality of butter made inside of four minutes from sweet milk, sour milk, sweet cream and sour cream by our churn, which is simple in its construction, convenient and adapted to general use.

We challenge the world! Come and see. B. F. FISHER.

Literary News.

The Scientific American.—The publishers of this widely circulated and popular illustrated weekly journal of mechanics and science, announce that it will be enlarged on the first of July, and otherwise greatly improved, containing sixteen pages instead of eight, the present size, which will make it the largest and cheapest scientific journal in the world; it is the only journal of its class that has ever succeeded in this country, and maintains a character for authority in all matters of mechanics, science and the arts, which is not excelled by any other journal published in this country or in Europe. Although the publishers will incur an increased expense of \$8,000 a year by this enlargement, they have determined not to raise the price of subscription, relying upon their friends to indemnify them in this increased expenditure, by a corresponding increase of subscribers. Terms \$2 a year, or ten copies for \$15. Specimen copies of the paper with a pamphlet of information to inventors, furnished gratis, by mail, on application to the publishers, MUNN & Co., No. 37 Park Row, New-York. MY EARLY DAYS; By Eliza W. Farnham.

The Authoress of this work has gained some notoriety in connection with emigration to California, to which place, some few years since, we believe she shipped a large number of women from the eastern States who were in want of employment and homes. Whether the work now given to the public under the above title is a record of her own early life or not, she does not say, but the reader is left to infer that it is, both from the rather vaguely written preface, and from the name borne by the heroine. The book contains over four hundred pages, and embraces eight years of the heroine's life, from the age of eight to sixteen. The style seems to be a cross between Miss Chesbro's transcendentalism, and Miss Warner's kitchen colloquials. It is what might be called the jerky style, abrupt at the beginning, abrupt all the way through, and snapping off at the end like a piston. It is just such a book as we should never want to put into the hands of children, and any grown person would need an uncommon stock of patience, perseverance and credulity to sustain them in the mortal effort to get through. Eliza is a perfect marvel of juvenile maturity; she is an orphan, with mind and thoughts beyond her years, and is in charge of a perfect ogre of an aunt, who beats her, calls her names, pours pails of water on her head and acts the termagant generally.—Eliza milks as many cows as she is years old, reads Voltaire, the Age of Reason, &c., and speculates a great deal on the mysteries of the inner life, dealing largely in spiritual visions, strange forebodings,

owings, and longings, and vague aspirations. It seems altogether like a made up book, and not one which gives us life, childhood's life, as we see and know it. As a literary work it is incomplete in itself, breaking off suddenly, as if the writer had been limited to a certain number of pages and stopped when the last was reached, whether there was a stopping place in the story or not. But this may be the foreshadowing of a sequel yet to come.

Burt, Hutchinson & Abby, New York, are the publishers, and the work is for sale by F. Raymond, Detroit.

Received.—Catalogue of the Shorthorn stock belonging to Samuel Thorne, of Thornedale, Washington Hollow, Dutchess county, New York. This list is an excellent guide to the qualities of that unrivalled herd, which in numbers, purity of blood, and excellence of quality, are superior even to the best herds in Great Britain. A note appended to the pedigree of one cow will illustrate this very effectually. Lallah Rookh, is a cow now eight years old. She was bred by the celebrated Col. Towneley, and before she was imported by Mr. Thorne, she was shown at the great prize shows of England. Amongst her competitors was a cow named Vestus, which she beat on each occasion. After the importation of Lallah Rookh at a cost of \$2,000, by Mr. Thorne, Vestus was shown at all the prize shows of England the next year, and swept all the first premiums, thus showing that Mr. Thorne was then in possession of a better bred animal than was then in Great Britain. These catalogues are distributed to whoever may apply for them.

Since the discontinuance of the American Veterinary Journal, the editor, Dr. Dadd, has been engaged on a work on cattle, which is to be in the same style as his "Anatomy and Physiology of the Horse," an excellent book. The new work will be quite an addition to the veterinary library.

Godey's Lady's Book for July is received. It has unusual attractions in the way of new contributors, fashion plates, patterns of various kinds, household recipes, &c., &c.

This number commences the fifty-ninth volume of the favorite monthly; may it live to be a hundred years old, and still be as fresh and beautiful as to-day.

Patent Office Report for 1857.—We acknowledge the receipt of the above Report from the Commissioner of Patents. It is a respectably printed volume of 550 pages, and contains much statistical information on a variety of subjects connected with farming interests, manufactures, trade, meteorology, &c., together with condensed correspondence on some topics to which we shall be likely to refer from time to time.

A new edition of the *Pilgrim's Progress* is announced, by Messrs. Longman and Co., with 44 steel etchings and 80 wood engravings, from designs by Charles Bennett, with a Preface by the Rev. Charles Kingsley.

The mournful yet eventful Story of Cawnpore is announced for publication by Mr. Bentley, told by Captain Moubray Thompson, one, it will be remembered, of the only two survivors of that deplorable massacre.

Mr. Hodgson, the old proprietor of the Parlor Library, has commenced a new series of cheap novels, the first being the *Rose of Ashurst*, by Mrs. Marsh.

Foreign News.

FRANCE.—The recall of the French soldiers on leave has added 120,000 veterans to the army.

The Paris Bourse was advancing, and the quotations were higher. Three per cent. rentes closed on the 8d at 68f. for money.

Flat-bottomed gun-boats are in process of construction in France to navigate the Po, Ticino, and other rivers of Italy.

Twenty-two additional battalions of foot chasseurs are to be organized.

ITALY.—The U. S. frigate Wabash, with the British men-of-war, fired guns in tribute to the memory of the late King of Naples.

It is stated that Piedmont has recognized the neutrality of the Papal States, with certain conditions.

GERMANY.—An extensive French manufacturer, whose establishment at Hesse Cassel employed 700 hands, has been compelled to quit, in consequence of the excitement against the French.

PRUSSIA.—The terms of the new loan by the Prussian government have been published. The loan is to bear 5 per cent. interest, and be issued by public subscription. The redemption of the loan is to commence in 1863, by the payment of 1 per cent. annually thereafter until it is called in.

TURKEY.—The garrison at Belgrade has been reinforced, and its numbers are reported to be trebled.

The Porte is about to send a strong naval force to the Adriatic.

The Herzegovina was in open revolt. The last intelligence was to the effect that a revolt in the whole of European Turkey was imminent.

TURIN, June 3.—Gen. Garibaldi has surprised and defeated the Austrians at Verese, and that town is again free of the enemy. Gen. Garibaldi re entered Como on the night of the 2d.

Gen. Niel entered Novara on the 1st, after a slight encounter with the Austrian out posts, who shortly fled. The Emperor arrived the same evening, amidst the acclamations of the people.

The Austrians endeavored to cross the Po at Bassequaro, but the inhabitants opposed them, firing upon and destroying an Austrian bark.

The Valtellina is in a state of insurrection. The town of Sondrio has proclaimed for King Victor Emmanuel.

The Duke of Parma has arrived in Switzerland. The French Engineers had arrived at Sutra, and were collecting vessels to cross Lake Maggiore with 5,000 men.

The French squadron in the Adriatic have captured 35 Austrian vessels, valued at four million pounds.

LONDON, Saturday, June 4.—A special dispatch to the *Daily News*, dated Turin, Friday night, says that the Austrians were in full retreat across the Ticino.

Garibaldi has gained a new victory, and the insurrection in Lombardy is spreading.

The Household.

"She looketh well to the ways of her household, and catcheth not the bread of idleness."—PROVERBS.

EDITED BY MRS. L. B. ADAMS.

JESSIE OWEN.

Oh! my poor heart, it got a dart,
As homeward we one night were going
And, strange to tell, the stroke befel
The side 'twas next to Jessie Owen!

The moonbeams bright, with fairest light,
Shone on her golden ringlets flowing
My heart, compelled by love was held
In that fair net, Oh! Jessie Owen!

And then her eyes! Stars in the skies
Envied the gleams they kept a-throwing
And as I looked alas they looked
My heart away! Ah! Jessie Owen!

And by the moon that shone above,
I saw her cheeks with blushes glowing
She knew, the witch, my lips did itch
To press those cheeks, did Jessie Owen.

When the cot door we came before,
My heart with thumps was going, going
I put my arm around her form,
And she—slid out, did Jessie Owen.

She asked me in, it was a sin
To see how kind the jade kept growin'
She held a kiss, I craved the bliss,
She laughing mocked me, Jessie Owen.

'Twas time to go, how did I know
But that for all these capers showin'
She felt like me? then oh to see
Me press the hand of Jessie Owen!

When as I pressed the little guest,
Methought I felt it softer growin'
Indeed it did, the witch had said
Dough in my hand, had Jessie Owen!

A. G. W.

Detroit, June, 1889.

Explanatory.

MRS. ADAMS:—Pardon the curiosity of an old subscriber and friend of the FARMER. I have been a constant reader of your paper a good many years, and especially of your department of it since the FARMER became a weekly. I don't suppose it would flatter you much if I should say that I read the Household with pleasure, and I hope you will not be offended if I tell you that there have been some things in it of late that I cannot quite understand—at least it puzzles me to reconcile some statements you made in that chapter about going into the country. In the first place you speak about having lived in those old fashioned times when farmer's girls wore woolen dresses and and leather shoes, and you mention the now obsolete fireplace as though it had been a familiar thing to you to cook dinners over its blaze, and this, with various other allusions to customs peculiar to ancient times, leads one to imagine—in short—pardon me for the suggestion—I could hardly reconcile this part with the after girlish frolic in the woods—the gathering wintergreen berries, cantering about on a man's saddle, &c., and I feel an irrepressible desire to know whether the whole of that chapter was a fiction. I hope it was not, for then I shall have the satisfaction of knowing that people may live to know something of the world, and yet not wholly outlive their capacity for enjoyment.

I do not intend this for impudence, but if it seems like it to you, let it pass without notice.

AN UNKNOWN FRIEND.

Our "Unknown Friend" has taken a very roundabout way to ask a very direct question. No doubt while reading the first part of the chapter referred to, he has fancied to himself an ancient dame in spectacles, with silvery locks hid beneath ample muslin cap borders, a prim, three-cornered kerchief around her neck, with the long ends crossed in front and pinned carefully away under each arm, her mind wandering over the long-gone past, and her trembling fingers tracing in such characters as they might the memories of those olden times. Poor old lady! No wonder our sympathizing friend found it difficult to follow her through the tangled blackberry thickets in search of wild flowers and wintergreens; and no wonder that he shook his wise head in doubt at the idea of her mounting a horse after a fashion so unusual among elderly matrons! Viewed by the light in which in our friend places it, the whole performance does wear rather a doubtful aspect, to say the least of it, but we can honestly assure him that the inconsistency is all in his own mind. We do not intend to answer his implied question any more directly than he chose to state it, but would simply ask him how many centuries he thinks have passed since stoves and kitchen carpets became common in the woods of Michigan, when it is only thirty-six years ago this June that nearly the whole white population of the Territory consisted of the little old French town called Detroit and two or three log huts a few weeks old on the banks of the Huron? It is true, emigration poured in rapidly, and settlements increased in number after it was found out that there was dry and beyond the aquatic regions surrounding Detroit; but for many years after that discovery, log houses with puncheon floors and broad-backed stick chimneys formed the chief features of Michigan architecture, and there was ample opportunity for young girls who were ambitious to emulate their notable mothers in the arts of housekeeping, to practice cooking over the blaze of the one, and to learn to wield the uncompromising split broom with telling effect upon the other.

Our friend must not let his imagination

run back to early times in the New England States, and fancy that we are dating our experience anterior to the Revolution, for we are essentially Wolverine in all but birth, having made our first play house and learned our first grammar lesson on the banks of the Huron, grown to womanhood and entered into some of its holiest relations on the banks of the St. Joseph, and watched Life's sun of Hope going down in the darkness and shadow of death on the banks of the Kalamazoo.

There are few phases of Michigan life, especially of pioneer and backwoods experience that we have not been familiar with, and are not sorry that our friend has given us occasion to say so, as we have understood from other sources that many country readers think of us only as identified with city life, and as having only a sort of imaginary or made-up sympathy with their labors and interests. This is not so. We are substantially of country make, body and mind, for, to farm living and to country schools we owe the best and most wholesome aliment of both. We know a good deal more about spinning wheel and cow-bell music than we do about pianos or guitars, and have been more used to the workings of churndashers, knitting needles, and so forth, than we ever shall be to crochet, crochets, Berlin wool marvels, or any other modern drawing room accomplishments in which the girls of to-day excel. For what mental culture we have been able to gain, we are indebted to no Boarding School, High School or Academy, but simply to the steady drilling of years in district schools, with few of the facilities now enjoyed, of studies simplified, and illustrations giving at a glance ideas which it then took days, and sometimes weeks and months of hard study to enable the plodding student of Murray and Daboll to comprehend. We can well remember with what delight our patient classes in grammar and arithmetic hailed the advent of Smith and Davies, and what a light was thrown over the civilized and uncivilized portions of the globe by the substitution of Olney for Morse in the Geographical department.

Surely this period is not so far down among the dark ages but what our "Unknown," if he still "retains his faculties," as the papers say of elderly people sometimes, may also have a dim recollection of it, and may thence draw his own conclusions in regard to our—in short—from the premises given, we leave him to judge whether we ought, by this time, to have "outlived all capacity for enjoyment," and will only add that the chapter in question gave a literally true history of our present occupation and of our country exploits.

P. S. We regret to learn since writing the above, that "Fanny" is sold and gone. The chances for another such ride are rather doubtful.

RECOLLECTIONS OF IRELAND.

PREPARED FOR THE YOUTHFUL READERS OF THE MICHIGAN FARMER: BY SLOW JAMIE.

NUMBER TWO.

As far back as I can remember, I had two older brothers, Hugh and William, attending school, with a teacher named McIlvain. He was considered a half fool, but he had sense enough (or little enough) to whip the scholars well. When they would return from school I would say, "Wur ye bate much the day, William?" "O ay," was often the answer, "when I would be done sayin me lesson the mather wud tak me up and bate till ye ud heer me cryin' at Debby Hanna's." Where Debby Hanna lived I did not know, but I supposed it might be half a mile from the school-house; and I would not go to him.

When I was between four and five years of age, by the exertions of a association in Dublin, called the Kildare Street Society, the common schools were placed on a better footing. All teachers were required to pass a Board of Examination, and McIlvain had to yield his place to James Moore.

The morning he came to the school, my father took me on his back and with my brothers started for the school. Every man he met he enquired "is the new Maister come yet?" till the uniform answer "ay," assured me that all was right. I soon got in high spirits, as well I might; I was under no apprehension of being whipped; my pockets were full of oaten cake; and I had an idea that my father would stay with me all day. In the last anticipation, however, I was doomed to a grievous disappointment.

Nor was this the only disappointment I experienced at school, for I soon learned that however superior to his predecessor he might be in common sense and education, he had the same ideas about discipline. He had about as much tact in mingling pleasantness with firmness, and making dry studies agreeable, as a hog has of politeness. The tawse with him, like a patent pill with us, was a remedy for all diseases. It was only when he was drunk that his brow relaxed into good humor, to give him a joke and us a laugh.

But as he was a respectable man and a member the Presbyterian church, that occurred but seldom, and we were sorry for it.

We sat six weary hours in school, without noon or recess. In lieu of dinner, each one might eat a bite of bread at any time, without leaving his seat. We might study as loud as we could whisper, but to have any communication, or even to look off the book, was considered a punishable offence—a rule which was enforced or neglected according to the leisure of the teacher.

In my father's school-boy days things were much worse, for now we had school books of a uniform kind, so that we recited in classes. But in his time each brought his own book, and brought just what he pleased. One brought a spelling book or primer, another a story-book or ballad, and another the Bible. It was nothing unusual to bring the Westminster catechism, first learn the letters in it, then spell, after that read it through, and finally commit it to memory. If the teacher could find enough of one kind of a book to form a class, he might do so, but commonly they recited one by one. They carried the independent principle so far, that in some schools each boy brought his own seat, if he had one to bring, and sat on the floor if he had none. When they learned to write, they brought little boards which they placed across the knee for a table. Whoever had an inkstand held it in his left hand, and whoever had none, borrowed from his neighbor, sometimes stepping half way across the room for each pen of ink. The scholars all studied aloud, the one who was reciting louder still, and the teacher loudest of all; so that the noise of the school was often like the roar of the sea.

But although ours was a great improvement on the old system, still I found it dry enough. With the teacher's permission we might go out, but that permission was given but once or twice a day. It is true, we got walking up to the teacher's desk five times a day to recite, which was a great relief. But then there were no mental exercises, such as questions in arithmetic, to call our minds into play—nothing but the dry spelling, and at that time I did not know of what use it was.

However, the blithesome evening followed the long, weary day; and the bright sunshine, the merry birds and the green hedges were all the pleasanter that we had been so long in jail; and indeed I learned more from these than from my books, at least till I had learned to read. But I will tell you about the way to school in my next.

Household Varieties.

DELAY.

The golden hours are fleeting, Jane;
The summer sweets are on the wane;
With brown is tinged the waving grain
Then why, O why delay?
There's danger in the word, my love
For life must ever onward move;
Its sands this truth too surely prove,
By running out away.

The fruit is on the bending bough,
But buds were there when first my vow
Was breathed to thee. Then answered thou—
There shall be no delay.
Yet feathered broods since then have flown,
The black-bird sings with mellowed tone,
The fire-tree drops its dusky cone,
Full over-ripe to-day.

The soft air rustles through the wheat,
As though to test, by contact sweet,
If autumn will its task complete,
To ripen—not delay.
Amidst the stems, the corn-flowers lie,
Their blue eyes watching poppies nigh;
But neither bloomed, dear love, when I
Confessed to thee in May.

Come, an' thou lov'st me, come with me;
The bells shall wake with marriage glee,
The clerk and parson clink their fee,
And both of them shall say:
"Was ever such poor gerdon given
For licensing a man to heaven?"
But bless them both, for they have given
The monster called—Delay.

Fashions.—The latest novelty in the way of bonnets is reported by the Paris correspondent of the London *Lady's Newspaper*. It has been lately adopted by the Empress, and is called the *Chapeau Imperatrice*. The sides of this bonnet are bent so as to almost touch the cheeks of the wearer, while the top is flattened down and made as wide as it can possibly be, in proportion to the size of the face it covers. An inverted triangle is a perfect representation of the front view of this bonnet.

The French ladies still hold to the long pointed bodies for dresses; they do not consider belts or belted dresses graceful.

We see that in this city, as the warm weather comes on, the horrid looking check and brown plaid dusters are coming out on the street's again. A lady, with one of these things hanging flabbily about her shoulders and person, looks like a huge parcel of millinery loosely done up in a towel, or table cloth, as the size may be. These articles may be very useful and convenient in traveling, but, as a part of a walking dress on the street, they give to the most graceful and otherwise well-dressed figure, a slatternly and ungainly appearance which should condemn them in the eyes of every woman of taste.

Bonnets are worn as small, and hoops as large as ever here, and dresses seem to be of every pattern and fashion under the sun.

A Domestic Necessity.—Every house should have as an inmate a good natured, tidy, sensible old lady. This important fixture should always be, if possible, a grandmother, or, as next best, an aunt; yes,

so indispensable to the respectability, comfort and convenience of a well regulated home is the old lady, that if this system of housekeeping became general, it will become quite natural to find, under the head of "wants" in newspapers, inquiries for proper old ladies to supply the lack of dear old folks gone to the better home. Indeed, old ladies, dis-covering themselves in demand, would keep in preservation much longer, nor begin to make winding sheets and grave-caps full ten years before the great reaper came to gather in the shocks of corn fully ripe. Old ladies are needed. Providence designed such to fill a large space in the domestic circle—a class remarkable as living not for themselves but for others—the most beautiful specimens of disinterested love this side of heaven.

A Sliding Scale of Politeness.—Count de Nieuwerke is celebrated for the tact which he marks by word and gesture the degree of esteem or consideration due to the rank of his guests. To indicate his success in this particular it is familiarly said that Prince Talleyrand must have taught him his beef lesson, the story connected with which runs thus:—One day Talleyrand had a dozen guests to dinner, and after the soup he offered some beef to his visitors. "My Lord Duke," said he to one with an air of deference, selecting the best piece, "may I have the honor of offering you some beef?" "My Lord Marquis," he said to a second, with a gracious smile, "may I have the pleasure of offering you some beef?" To a third he said, with an affable air, "Dear Count, may I offer you some beef?" With an amiable smile he asked a fourth, "Baron, will you take some beef?" To a fifth, who had no title of nobility, but was an advocate, he said "M. le Conseiller, will you have any beef?" Finally, to the gentlemen at the bottom of the table, Talleyrand pointing to the dish with his knife, called out, with a jerk of the head and a patronising smile, "A little beef?"

Young Unmarried Italian Ladies.—The idea of a girl in Italy is indissolubly connected with that of a being devoid of all moral sense, infallibly preferring wrong to right, and who can only be kept from harm and evil by the most incessant watchfulness. A mother's whole maternal duties towards her daughter seem considered in Italy to be comprehended in the one act of vigilance. "My daughter has never been, since she was nine years old, for more than twenty minutes at a time out of my sight," said an Italian countess, boastfully; and by this declaration she appeared to think that she merited to take rank in the world's esteem with the mother of the Gracchi. A girl belonging to the upper ranks of life in Italy is practically a prisoner until she marries. Into society she must not enter; neither in the morning dress, nor in the evening dress, is she permitted to display her charms and graces. An occasional walk with father, or brother, or mother, is permitted; but she must not go outside the house unless accompanied by her nearest kindred. To be seen alone, even but a few yards from her father's door, would entail upon her the deepest disgrace and heaviest censure. Kept under a perpetual surveillance, every line she writes and every line she receives are subjected to rigid scrutiny.—*Miss Crawford on Tuscany.*

Moorish Courtship.—When a young Moorish gentleman is moved by matrimonial longings he deputizes some friend—generally an old woman—to propose for him. If the damsel accepts, they are married before the Cadi. The bride is duly tattooed, painted and decked in her richest finery. The friends assemble in the court yard. The bride is unveiled, and the loving couple see themselves for the first time. The husband can repudiate but the wife cannot. Then follows a grand pow-wow, dancing, and the blowing of discordant instruments. The mother of the young man dances for her son, and the mother of the wife for her daughter. The revel is kept up all night, to the confusion of the neighborhood.

Once, says Coleridge, I sat in a coach opposite a Jew—a symbol of old clothes bags—an Isaiah of Hollywell street. He would close the window; I opened it; he closed it again; upon which, in a very solemn tone, I said to him: "Son of Abraham, thou smellest! son of Isaac, thou art offensive! son of Jacob, thou stinkest foully! See the man in the moon! he is holding his nose at thee at that distance. Dost thou think that I, sitting here, can endure it any longer?" My Jew was astonished, opened the window forthwith himself, and said "he was sorry he did not know before I was so great a gentleman."

Cultivated Women.—Sheridan said, beautifully, "Women govern us; let us render them perfect. The more they are enlightened, so much the more shall we be. On the cultivation of the mind of women depends the wisdom of men. It is by women that nature writes on the hearts of men."

Mary's Married Life.

CHAPTER III.

Mary's tears were checked instantly. A cold, chilling sensation seemed to settle down around her heart; but there was no time for explanation now; some of the guests were passing; the Doctor went out and joined them as carelessly as if nothing had occurred. Mary had Wallace removed to his room, and, assuming a serenity she did not feel, went through with the duties of the evening. With a feeling of relief she witnessed the departure of the last guest, and then sought an explanation with her husband, whose cold looks and altered manner, though unnoticed by others, fell upon her heart like a sudden and fatal blight.

Dr. Freeland was not intoxicated, but he had drunk enough to blunt his sensibilities; he heard Mary's explanation of his cousin's behavior with indifference; said it was very possible that Wallace had mistaken her for Rosalie Hadley seeing it was so difficult to distinguish her curls from chestnut brown, and advised her all means to persuade him to sign the temperance pledge without delay. This was the beginning of sorrows in reality for

poor Mary. Words were of no avail in softening her husband's manner towards her, and even the penitent confessions of Brydon the next day were received with a coldness and look of distrust which showed a determination to cherish the suspicion that had taken possession of his mind. Wallace Brydon was shocked beyond measure at the result of his momentary madness and folly, as the proceedings of the past night were related to him by Mary when she appealed to his generosity to exculpate her in her husband's eyes. All that a man thus situated could say or do, was said and done. Dr. Freeland readily admitted the truth of all his cousin's humiliating self-accusations and confessions of weakness and want of manly, resolute stability of character and self-control. These, he said, were characteristics of men whose minds as well as their virtues depended on the state of their nerves for whatever brilliancy or strength they might possess, and he was not surprised that other minds similarly constituted, should, after a long season of severe tension in the vain effort to accommodate themselves to one of higher tone, suddenly relax and seize a convenient movement to blend with elements of their own capacity. It was very natural—mind, like water, would seek its level, and however much it might be elevated by artificial means, let the barrier once be removed and no stagnant pond beneath was too low or too foul for companionship with what had seemed the purest, charest mountain stream. He was not, surprised at inevitable result of natural laws, however unprepared he might have been for the scene he had witnessed.

There was something in his looks and tone as he said this, even worse to Mary than the cruel sarcasm conveyed in every word he uttered. She could not speak; but Brydon's pride and indignation were roused, and a less stoical man than Dr. Freeland would have listened with admiration to the torrent of eloquence he poured forth not in defence or justification of his own folly, but in vindication of an injured wife and innocent woman. In concluding, he referred again to himself, spoke of his own inexcusable weakness in yielding to temptations against which they had both warned him, and offered to join them both in a solemn pledge from that hour never to yield again, neither to taste the intoxicating cup themselves or offer it to another. Dr. Freeland gave the youth a look of pitying contempt, and there was a scornful sneer on his lips as he replied: "There is something hopeful even in imbecility when it understands its own position so well, and seeks to prop up its weakness with catharsis and pledges; use them; you have abundant need; and the more you parade your intentions before the world, the more apparent will be your sincerity, and the more public your shame. Whatever may be your course it affects me as little as the oak on yonder hill is affected by the web some cunning spider has woven among the branches. It may entrap the buzzing insect that has soared a summer day above its sphere, proud in the belief that the flutter of its feeble wing was necessary to the oak's existence. The wind may sweep away the web and insect together and the oak will remain. The artful spider may cling to the branches it is true; he has claims there, both having sprung from the same earth."

"By heavens! though you are my cousin and my superior in all but humanity, the noblest part of manhood, you shall not talk to me thus!" exclaimed Brydon springing to his feet and confronting the Doctor, who had also risen as if by a simultaneous impulse; "There is a limit to even my forbearance, and that you have passed. All the bitter epithets you can invent to attach to my name as expressive of your anger or indignation at the madness of which I have been guilty, I will bear without a murmur, for I deserve a greater punishment than you have power to inflict, since I have brought unhappiness to one whom even your daring lip would tremble to name in connection with aught that is impure; but, by the heavens above us! Edward Freeland, though you were ten times my cousin or my brother, and I ten times the monster you would make me, I am not so lost to decency and self-respect as to listen unmoved to such taunts as these. I cannot be the champion of your wife against yourself, cruelly and basely as you have coupled her name with mine, but I fling in your face the unmanly insinuations you have cast upon me, and, epiderm if I am, you will never find me clinging to any branch of yours for support. No; let the Upas stand, glorying in its isolated strength, rank with the deadly poison of its nature; let it stand till the lightnings shall shiver its trunk and its leaves be scattered by the tempest. Who loves it? who envies it? who thinks of it but to pity the victims its tempting leaves have lured within its fatal

shadow! The spider, thanks for the suggestion, will be happier in a humbler sphere, weaving out its own life for an honest subsistence. I am poor now, and under obligations to you for the meat I have eaten at your table, and the shelter your roof has given me for the past three months; but as I live you shall not have it to say of me three years hence that I owe you the value of a farthing. There will be no prouder moment of my life than that which witnesses my last obligation to you cancelled in the only way that a soul like yours can appreciate. We shall not care to meet again soon; farewell. Farewell, cousin Mary. God pity and bless you." And Wallace Brydon was gone.

During the conversation between Dr. Freedom and his cousin, Mary was silent; her thoughts went over all the past, yet she weighed every word her husband uttered. There was injustice, cruelty and insult both to herself and Brydon in his words and in his tone, yet by that strange philosophy with which woman reconciles her wrongs with her love and loves her tyrant still, she found excuse for him in her own inexperience of life, her almost childish dependence upon him, and that yielding temperament, so unlike his own, which had prompted her all along, to "bow to any gods" for his sake. And then her sister's words recurred to her with startling emphasis; "You will need a stronger arm beneath you some day;" and with the words came too, like an accusing spirit, the resolution she had then made to be a better Christian. Where there was so much reason for self-accusation there was little occasion or desire to judge others severely. His treatment of Brydon she could forgive; both had been drinking, one was excited to madness and to the commission of a reckless impropriety of which the other could not be guilty, and which nothing would induce him to overlook. It was best that Brydon should leave; they were so unlike; it was annoying to a proud man like her husband to have one near him who could be so easily and so often led astray. She was not sorry he had gone, yet she admired his talents and felt a sympathy for his unfortunate weakness which would have prompted her to spring to his side, to strengthen and sustain him under the bitter and taunting reproaches that had just been cast upon him, had she not seen with what an answering spirit those reproaches were met. Her husband's taunts aroused a latent fire in his cousin's nature which might prove his salvation, for that she could forgive him, as in that newly-awakened energy lay her hope of a nobler and better future for their young relative. Her confidence in her husband was, if possible, stronger than ever; but she was mistaken in his character in supposing what he had said of herself only the effort of a momentary excitement. He was a man who had in reality very few of the qualifications necessary for happiness in a quiet domestic life. Vanity was the leading, governing principle, the main spring of all his actions, yet, next to a weak and vacillating character, it was what, more than all other things, he despised in others. He had loved his wife as much as it was in his nature to love any one but himself; perhaps few other women would have retained his respect or escaped the knowledge of his indifference even as long as Mary did; and it was long indeed before she could realize that what she at first regarded as a burst of passionate indignation, excusable under the circumstances, was in truth the settled and unaltered opinion he had formed of her mind and heart. It took years of chilling distrust, indifference and neglect to convince her that he did indeed look down upon her as an inferior, one who had played her part well for a time, and to whom he had stooped as custom and policy required, but whose social interests were no further identified with his than that she bore his name, kept his house and reared his children. Mrs. Porter was not long in observing the change that came over her sister's domestic life, a reserve unnatural to her in her younger years, but growing so gradually, as the knowledge of her husband's true character forced itself upon her, that, as years passed, it seemed as much a part of her nature as did the cheerful submission which had always characterized her when trials were to be borne, or sorrow endured. She was a mother, and a mother's cares and joys occupied her mind and time, leaving little leisure, apparently, for other thoughts. She gradually withdrew from the gay society into which as a bride she was first introduced, and seldom accompanied her husband from home; indeed since the events of that unfortunate night from which she dated his estrangement, she was seldom invited, never urged by him to participate in public gaieties, though there were few of the more exclusive or so called, aristocratic assemblies from which he was absent.

(To be continued.)

Hints for Travelers.

At this season many persons contemplate traveling; to do so with the largest amount of comfort and advantage, physical, social and mental, the following suggestions are made:

Take one-fourth more money than your actual estimated expenses.

Acquaint yourself with the geography of the route and region of travel.

Have a good supply of small change, and have no bill or piece higher than ten dollars, that you may not take counterfeit change.

So arrange as to have but a single article of luggage to look after.

Dress substantially; better be too hot for two or three hours at noon, than to be too cool for the remainder of the twenty-four.

Arrange, under all circumstances, to be at the place of starting fifteen or twenty minutes before the time, thus allowing for unavoidable or unanticipated detention on the way.

Do not commence a day's travel before breakfast, even if that has to be eaten at daylight. Dinner or supper, or both, can be more healthfully dispensed with than a good warm breakfast.

Put your purse and watch in your vest pocket, and all under your pillow, and you will not be likely to leave either.

The most, if not only secure fastening of your chamber door is a common bolt on the inside; if there is none, lock the door, turn the key so that it can be drawn partly out, and put the wash basin under it; thus, any attempt to use a jimmy or put in another key, will push it out, and cause a racket among the crockery, which will be pretty certain to rouse the sleeper and rout the robber.

A sixpenny sandwich eaten leisurely in the cars is better for you than a dollar dinner bolted at a "station."

Take with you a month's supply of patience, and always think thirteen times before you reply once to any real or supposed rudeness or insult, or inattention.

Do not suppose yourself specially and designedly neglected, if waiters at hotels do not bring what you call for in double quick time; nothing so distinctly marks the well bred man as a quiet waiting on such occasions; passion proves the puppy.

Do not allow yourself to converse in a tone loud enough to be heard by a person at two or three seats from you; it is the mark of a boor in a man, and of want of refinement and lady-like delicacy, if in a woman. A gentleman is not noisy; Ladies are serene.

Comply cheerfully and gracefully with the customs of the conveyances in which you travel, and of the places where you stop.

Respect yourself by exhibiting the manners of a gentleman and a lady, if you wish to be treated as such, and then you will receive the respect of others.

Travel is a great leveller; take the position which others assign you from your conduct rather than from your pretensions.—*Hall's Journal of Health.*

Household Recipes.

An Old Recipe.

We copy the following from an old volume of Gerard's Botany, published in London in 1597, 262 years ago. The Monk's Rubarb is a kind of Dock sometimes called Patience:

"If you take the roots of Monk's Rubarb, and red Madder of each half a pound; sena fower ounces; annise seede and licorice, of each two ounces; scabiousse and agrimonie, of each one handfull; slice the roots of he Rubarb, bruse the annise seede and licorice, breake the herbes with your hands, and put them into a stone pot called a steane, with fower gallons of strong ale to steape or infuse the space of three daies; and then drinke this liquor as your ordinarie drinke for three weeks together at least, though the longer you take it so much the better; providing in a readiness an other steane so prepared that you may have one under another, being always careful to keepe a good diet; it cureth the dropsie, the yellow jaunders, all manner of fitch, scabs, breaking out and manginess of the whole bodie; it purifieth the blood from all corruption; prevaileth against the green sickness greatly, and all oppilations or stoppings, and maketh young girls look faire and cherrie-like."

Cream Cheese.

Take a quart of cream, or, if not desired very rich, add thereto one pint of new milk; warm it in hot water till it is about the heat of milk from the cow, add a small quantity of rennet (a table spoonful is sufficient,) let it stand till thick, then break it slightly with a spoon, and place it in the frame in which you have previously put a fine canvas cloth; press it slightly with a weight; let it stand a few hours, then put a finer cloth in the frame; a little powdered salt may be put over the cloth. It will be fit for use in a day or two.

Another Method.—If cream is scarce, so that a sufficient quantity cannot be had at once, take a fine canvas bag, and pour as much cream as you may happen to have into it, adding additional small quantities of ice a day, and from its becoming naturally sour, the thin part will drain through the canvas, and the remainder will prove an excellent cheese. If one quart of cream can be had at once, and poured into a fine canvas bag, it will make a nice sized cheese, and of course equally good as the one made by several quantities added at convenient intervals. The cheeses made in this way are not fit for use so soon as those made with net.

GROVER & BAKER'S CELEBRATED FAMILY SEWING MACHINES,

495 Broadway, New York.
143 Jefferson Avenue, Detroit.
58 West Fourth Street, Cincinnati.
A NEW STYLE—PRICE \$50.

This machine sews from two spools, as purchased from the store, requiring no rewinding of thread; it Hems, Fells, Gathers and Stitches in a superior style, finishing each seam by its own operation, without recourse to the hand-sewing, as is required by other machines. It will do better and cheaper sewing than a seamstress can, even false works for one cent an hour. Send for a Circular.

WHEELER & WILSON'S IMPROVED SEWING MACHINES.

PRICES GREATLY REDUCED.
Particular attention is invited to the NEW STYLE AT \$50.00.

SEND FOR A CIRCULAR.

L. D. & H. C. GRIGGS,
GENERAL AGENTS for Michigan and Western New York.

145 Jefferson Avenue, Detroit.

GOOD NEWS.—A reduction in the prices of Sewing Machines announced in our advertising columns.—The utility is established beyond question, and at the present prices we see no reason why they should not be found, as they ought to be, in every household. Several varieties are manufactured, adapted to various purposes. So far as public opinion has been formed, and uttered, the preference is emphatically accorded to the Wheeler and Wilson machine for family use, and for manufactures in the same range of purpose and material. During the present autumn the trials have been numerous, and all the patrons of any pretension have brought fairly into competition. In every case, the Wheeler and Wilson machine has won the highest premium. We may instance the State Fair of New York, New Jersey, Pennsylvania, Kentucky, Illinois, Wisconsin, Virginia, Michigan, Indiana, Mississippi, Missouri, and California, and the Fairs in Cincinnati, Chicago, St. Louis, Baltimore, Richmond, and San Francisco. At the Fair of the St. Louis Mechanical Association, the Examining Committee was composed of twenty-five Ladies of the highest social standing, who, without a dissenting voice, awarded for the Wheeler and Wilson Machine, the highest only premium, a Silver Pitcher, valued at \$75. If these facts do not establish a reputation, we know not what can.—*Christian Advocate and Journal.*

IMPORTANT TO THE FARMER. SAVE YOUR GRAIN.

As the prospects are flattering for heavy crops and good prices, it will be of great importance to the grain growers to procure the best machine in order to save their grain.

COX & ROBERT'S PATENT THRESHER AND CLEANER

Surpasses every machine that has been introduced into the country. Their plan of separating is so complete that it is impossible for grain to pass out with the straw, which is a very important item.

These celebrated machines have been in successful operation for several years, in the States of Missouri, Illinois, Wisconsin, Michigan and all the principal wheat growing States in the Union, and have proved in every respect greatly superior to any in use, being simple in their construction, easy and durable, and capable of getting out of repair, and are not only warranted to three years, but in much better manner; separating the grain from the straw on a vibrating separator with half revolving rake attached, which is so constructed as to render it impossible for grain to pass over with the straw. The Fanning Mill is very large and cleans the grain suitable for market.

These Machines have taken the Premium at the Michigan State Fair in 1888, also at the Mississippi Valley Fair held at St. Louis, where they were run in competition with Pitts, Moffats, Rawlston and other first class machines, and was awarded the First Premium and Gold Medal.

These machines are fitted up with an iron concave, perforated so as to allow three-fourths of the grain to pass through before it strikes the separator.

The cylinders are built of iron or wood, "open or tight," to suit the purchaser.

They have tried their machines this year in order to give them still greater capacity for threshing, other improvements are being made, when the slightest defect has been discovered, as they are determined to keep their machine in advance of any other, and retain the credit they have so fairly won and richly deserve.

They manufacture various sized Horse Powers and machines, varying in price from \$175 to \$350.

Their patent internal double geared 10 horse power is considered the strongest and most durable power in use.

Robert's Patent Lever for six or eight horses is a very light running power, being single geared, is very simple and one that we would recommend for light draft.

Their Endless Chain Power for one or two horses is very reliable; wrought iron links being used instead of cast iron, consequently they are not so liable to break or wear out.

OPINIONS OF THE PRESS:

Thousands of the best farmers in the country can be produced, but we deem it unnecessary to publish them. We will merely insert the following from the St. Louis (Mo.) *Republican*, giving an account of the trials of the various threshing machines at the Missouri State Fair held at St. Louis in 1888.

TRIAL OF THRESHING MACHINES.

"As was announced on the previous day, the grand trial came off yesterday south of the agricultural tent. The occasion was interesting, exciting and instructive, so much so that a great crowd was drawn off from the other departments to witness the test. The first trial was made on Cox & Robert's Patent Thresher and Cleaner, four horses were attached to the machine and in eight minutes (the length of time agreed upon) ten bushels and twenty-five pounds of wheat were threshed and cleaned. The threshing was done with less noise, friction and vibration than any other machine that has come under our notice.

"The test was then applied to the following machines with the results appended:

Moffat's Patent, 10 bushels and 11 pounds.

Rawlston's Patent, 6 bushels and 55 pounds.

FOUR HORSE THRESHERS.

Moffat's Patent, 7 bushels and 22 pounds.

Cox & Robert's Patent, 10 bushels and 25 1/2 pounds.

The time occupied by each eight minutes. It will be observed by reference to the above that the last named machine performed more with four than either of the others did with eight horses."

For further particulars apply to, or address by letter,

COX, HIBBS & CO., Manufacturers,

Three Rivers, Mich.

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NALL, DUNKLEE & CO.

Would invite the attention of the Farmers of Michigan when visiting Detroit, to their extra

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DRY GOODS,

Fancy Silks, Black Silks.

Organdy Robes, Pohlen Robes,

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Printed Robes, French Prints,

Laces, Embroid.

White Goods, Kid Gloves.

Hosiery, Sheetings, Cloths,

Flannels, Ticks, Printed Lawns

Cambries, Ginghams,

Muslin de Laines

Stella Shawls, Broche Shawls.

Is complete in all its branches.

Tapestry Velvet Carpet,

Imperial Brussels do,

Extra Super Ingrain,

Superfine do, Fine Ingrain do,

Cotton and Wool do,

Silk Damask, Worsted do,

Moreens, Druggets, Green Balzae,

Coccos Matting, Plain and Check Matting,

Gilt Shade, Common do,

Shade Tassels, Cornices,

Rugs and Mats,

Window Hollands,

Window Shades,

Oil Cloths, 3, 6, 12, 18 and 24 foot,

Live Geese Feathers, Paper Hangings,

Which we offer cheap for cash.

NALL, DUNKLEE & CO.

14-17 No. 74 Woodward Avenue, Detroit.

1859, SUMMER ARRANGEMENT, 1859.

MICHIGAN SOUTHERN AND DETROIT, MONROE and TOLEDO RAIL ROAD.

ON and after Monday, April 18th, 1859, Passenger Trains will run as follows:

Leave Detroit for Adrian and Chicago at 6.45 A.M. and 5.00 P.M.

Arriving at Adrian at 9.57 A.M. and 10.00 P.M.

" Chicago at 7.00 P.M. and 7.00 A.M.

For Monroe, Toledo, Cleveland, Cincinnati, Buffalo and New York: Leaves Detroit at 6.45 A.M. and 1.00 P.M.

Arrives at Monroe at 8.38 A.M. and 3.30 P.M.

" Toledo at 9.35 A.M. and 4.30 P.M.

Leaves Toledo at 10.15 A.M. and 5.30 P.M.

Arrives at Cleveland at 8.10 P.M. and 9.20 P.M.

From Chicago for Detroit:

Leaves Chicago at 6.00 A.M., 8.00 A.M. and 8.00 P.M.

From Cleveland for Detroit:

Leaves Cleveland at 4.00 A.M., 11.25 A.M., and 6.20 P.M.

" Toledo at 4.10 P.M., 10.35 P.M.

Trains arrive at Detroit from Chicago, Adrian, Cleveland and Toledo at 1.35 A.M., 12.15 P.M. and 7.15 P.M.

CONNECTIONS:

The 6.45 A.M. Train from Detroit makes direct connection at Adrian, with Express Train for Chicago and Jackson. Arriving in Chicago at 7.00 P.M., in time to connect with the Trains of all Roads running west of Chicago; and at Toledo with Express Train for Cleveland—arriving in Cleveland at 8.10 P.M., making direct connection with Express Train for Buffalo and New York; arriving in New York at 1.20 P.M., and with the Express Train for Pittsburgh.

The 1.00 P.M. Train connects at Toledo with Express Train for Cleveland, Buffalo, and New York—arriving in Cleveland at 9.20 P.M. and New York at 9.30 P.M.—next evening, and with Express Train for Pittsburgh.

The 5.00 P.M. Train, connects at Adrian with Express Train for Chicago—arriving in Chicago at 7.00 A.M.

The 6.20 P.M. Train from Cleveland, and 10.35 P.M. Train from Toledo, arrives in Detroit at 1.35 A.M.—Making Direct connection at Detroit with Express Train on Great Western Railway for Suspension Bridge and Niagara Falls.

The 11.25 A.M. Train from Cleveland; the 6 A.M. Train from Chicago via Adrian, the 8 A.M. Train over Air Line via Toledo and 4.10 P.M. Train from Toledo, makes direct connection at Detroit with Express Train on Great Western Railway for Suspension Bridge and Niagara Falls, leaving Detroit at 8.00 P.M.

Direct connections are also made, at Detroit with the Detroit and Milwaukee Railway.

Sleeping Cars accompany the Night Trains between Adrian and Chicago.

No change of Cars between Detroit, Adrian and Chicago.

JNO. D. CAMPBELL,

SUPERINTENDENT.

L. P. KNIGHT, Agent, Detroit.

FARMERS OF MICHIGAN!

Who want to purchase

AGRICULTURAL TOOLS

AND

IMPLEMENT!

As you would secure your own interests, get the articles manufactured by

WATERS, LATHROP & McNAUGHTON,

In the City of Jackson.

Waters, Lathrop & McNaughton

Make the

MOST DESIRABLE KINDS

of Farming Utensils, and the

BEST OF THE KIND.

Among their manufactured articles are found the best

Cultivators, Harrows,

and

POTATO DIGGERS

Of different patterns, also,

PLOWS and ROAD SCRAPERS,

STORE TRUCKS

For Stores and Granaries. Every Storekeeper and every large Farmer wants one.

The Best Harvesters

In the country, and

THRESHING MACHINES.

With Separators or without them. Their Harvesters are

Allen's Combined Mower and Reaper.

AND

Allen's Mowing Machine.

(R. L. Allen's patent, New York, with his very latest improvements.) The

Buckeye Mower and Reaper.

AND

Aultman & Miller's Mowing Machine.

(C. Aultman, of Canton, Ohio)

These are undoubtedly the best two Harvesters and Mowing Machines for either rough or smooth ground, wet marsh or dry meadow, and for standing or fallen grain. The farmer who uses either of these need desire nothing more in that line. Also a superior

REVOLVING HORSE RAKE,

With sixteen teeth, being the greatest labor saver known on any farm. The very best

Grain Cradles, Scythes, Scythe Snaths,

Horse Rakes, Gigg Rakes,

Hand Rakes, &c.,

Including

THE CELEBRATED MORGAN CRADLE & SCYTHE

THE CELEBRATED MULLEY SCYTHE SNATH,

THE "EXCELSIOR" SCYTHE SNATH,

BUSH SNATHS, WITH TWO HEEL RINGS,

AN IMPROVED HORSE POWER,

For one or two horses, and a perfect charm of a

DOG POWER.

For Churning, Washing, &c.

Water's Superior Grass Scythe.

This Scythe, of rolled and polished steel, is beyond a doubt the NE PLUS ULTRA in the line of Grass Scythes. No mower who has ever used one, would give it for one of any other kind.

GOOD AND CHEAP STRAW CUTTERS.

All the desirable varieties of SHOVELS, SPADES, SCOOPS, HOES, TOOLS, RAKES, POTATO HOOKS, and FARMING and GARDEN TOOLS generally, and all sorts of TOOL HANDLES.

WATERS, LATHROP & McNAUGHTON.

15-18w Jackson, Mich.

LAWTON BLACKBERRIES FOR SALE

At the rate of \$2.00 per dozen, or \$10.00 per hundred by

HUBBARD & DAVIS,

Fort Street, Detroit

7-3m

SUFFOLK

AND

ESSEX PIGS FOR SALE.

THOROUGH BRED SUFFOLK and ESSEX PIGS

for sale. For particulars, address

J. S. TIBBITS, Nankin, Mich.

RAY'S SECRET OF HORSE TRAINING

With a fine Portrait, Price 25 cents and sent free of

MICHIGAN FARMER.

R. F. JOHNSTONE, EDITOR.
Publication Office, 130 Jefferson Avenue.
DETROIT, MICHIGAN.

S. FOLSON,
WOOL DEALER,
90 Woodward Avenue,
DETROIT, MICHIGAN.

THE MARKETS.

Flour and Meal.

The reports of the destruction of the wheat and other crops by frost seem to have as yet no effect on the prices of grain and flour. Very little has been brought in during the past week, and as no sales of account are taking place, quotations remain the same as last week in this city.

The Cincinnati Price Current of the 15th gives the following rates:

"Flour—Market dull. Sales of unbranded at \$5.50 @ 6.12½; superfine, \$6.50 @ 6.75, the latter price for St. Louis, and \$7.00 @ 8.25 for extra. Week's receipts, 8,700 bbls; exports, 2,000 do, to Texas, Florida and Boston.

"Wheat—No sales reported. Week's receipts, 800 bags; no exports.

In the New York market on the 16th, the inquiry for western canal flour was fair, but at lower figures for the low and medium grades. At the abatement there was a better demand and good brands were in request. Unbranded State is slow of sale and is plenty. The sales were 8,200 bbls at \$4.75 @ 5.75 for rejected state; \$6.20 @ 6.40 for inspected superfine do; \$6.50 @ 6.90 for extra do; \$6.80 @ 7.20 for low grade of western extra; \$7.10 @ 7.40 for shipping brands of round hoop extra Ohio; \$7.50 @ 8.50 for trade brands do; \$7.70 @ 8.10 for St. Louis brands, and \$7.70 @ 8.25 for extra Genesee.

The United States Economist of the 15th, after summing up the probable effects of the war upon the prices of breadstuffs, says:

"It will be seen that in times of former wars wheat has been cheaper in France than in time of peace, and for the obvious reason that under ordinary circumstances France produces a surplus to export, which cannot be done in time of war. For the same reason, England—which never produces enough for her own wants—is greatly embarrassed in time of war, if the crops are deficient. With the seas open to each power, there is for present no prospect of an effective rise in grain."

Millfeed—\$17 per ton.
Corn—Ranges from 76c to 80c.
Oats—Fair demand at 52c @ 53c.
Butter—12c to 12½c for prime quality.
Potatoes—Advancing; pinkeyes, 55c @ 60c, meshannocks, \$1.00.
Eggs—12½c is the current price.

Live Stock, &c.

In this city, beef cattle of first quality bring but 4 cts. per lb.; sheep \$2.00 per head, and lambs from \$1 to \$1.50. In New York and Albany it is said that the strawberry season, which is now at its height, affects the meat market to some extent. The cattle yards at both places are well stocked from the west and rather slowly emptied by butchers and consumers. The New York prices range as follows for this week:

First quality.....	10½ @ 11 c.
Medium.....	9½ @ 10 c.
Ordinary.....	8½ @ 9 c.
Some extra good may be quoted at.....	11½ @ 12 c.
The general average of the market.....	10 c.
The most of the sales range from.....	9½ @ 11 c.

The Albany cattle market is reported as overstocked this week, there being nearly 4,000 in the various yards. We notice among them one lot from Michigan, H. C. Mallory, of Hillsdale county, 15 head. The following quotations show a decline in prices from last week:

Superior.....	10½ @ 11 c.	Last Week.....	10½ @ 11 c.
First quality.....	9½ @ 10 c.	9½ @ 10 c.	9½ @ 10 c.
Second quality.....	8½ @ 9 c.	8½ @ 9 c.	8½ @ 9 c.
Third quality.....	7½ @ 8 c.	7½ @ 8 c.	7½ @ 8 c.
Inferior.....	6½ @ 7 c.	6½ @ 7 c.	6½ @ 7 c.

Wool.

Prices still range high, and in some localities as high as 45c is paid, while at other points 40c is the highest price. Mr. Wood, of Enfield, Mass., Mr. Colt, of Pittsfield, Mr. Harrington, of the firm of Harrington & Warren, have taken all their men out of the market. S. Folson, of this city, has done the same; all large buyers. They choose to wait till rates become more settled. Dozens of extracts might be made from our country exchanges, but they all amount to the same thing, ranging between 33 and 45c, according to the amount of local competition. The Ypsilanti Sentinel advises farmers to "hold on," while the Pontiac Jacksonian urges them to sell as soon as possible. We quote eastern advices:

"The inquiry for mostly all descriptions is quite limited for the moment, as the attention of the trade is still diverted towards the interior; but, from what we can learn, the transactions there are less extensive than usual at this season, and the probability is, as we have before remarked, that most of the clip will be stored; the transactions here have been confined to small parcels of three quarters and full-blood Saxony at 30½ @ 32; 50,000 lb. at 30½ @ 32; 150 bales California medium to fine at 32½ @ 34; 40, common coarse Spanish at 9½ @ 10; and 65 Donsol on private terms. We quote:

Am. Saxony fleeces.....	56 @ 60
Am. full blood Merino.....	58 @ 65
Am. ½ and ¾ Merino.....	46 @ 49
Am. native and ¾ Merino.....	40 @ 44
Extra, Pulled.....	42 @ 45
Superfine, Pulled.....	48 @ 50
No. 1, Pulled.....	38 @ 35
No. 1, Tribune, 16th.....	38 @ 35

PROVIDENCE.—The sales for the week have been 30,000 lbs. fleeces at 30½ @ 32; and 8,000 lbs. pulled at 45 @ 50.

ST. LOUIS.—Receipts are increasing, but the market is very quiet and sales are small. Buyers are still paying from 18 to 22c. for unwashed, and from 30 to 35c. per lb. for washed, though prime and choice lots will command a few cents higher. Price Current.

BOSTON.—There has been a fair inquiry for domestic wool the past week, and in prices no material change. No fleece of any consequence in market. The sales have been 50,000 lbs. principally pulled, in the range of quoted rates. The advices from the country are pretty much the same as last week. The views of buyers and sellers are too wide apart for active movements. Some western buyers have already returned without effecting any purchases, and the bulk of the clip is likely to remain in the hands of growers for the present.

PHILADELPHIA.—Wool is beginning to come forward more freely, but the market is excessively dull, and the opening rates have not yet been fixed. Thus far the amount of the new clip which has changed hands is small compared with that of former seasons, and it is quite probable that under all the contingencies—war in Europe, heavy importations of the precious metals, and a tight money market—the farmer will have to be satisfied with prices much lower than at this time last year. Among the sales were 5,000 lbs. unwashed at 33½ @ 35; and 1,100 lbs. tub washed at 38c, cash.—Com. List.

BALTIMORE.—Wool is coming forward pretty freely, and with a little competition among purchasers here, prices have advanced slightly. Unwashed wool is now bringing 22½ @ 24; tub washed 32½ @ 34; No. 1 pulled 27c @ 30c; pulled Merino 32c @ 34; and for fleeces wool prices range at from 30 to 45c per lb. The consumptive demand for wool is limited, and but few of the eastern manufacturers are purchasing to any extent. We note the import this week of 163 bales wool from Buenos Ayres.—Daily Exchange.

WOOL CLOTH AND FLANNEL.

WM. WALLACE, of Battle Creek.

ANNOUNCES that he is prepared, with new and improved machinery in the best styles, and keeps for sale CASSIMERES, FULLED CLOTHS, RED FLANNELS, SATINETS, AND FINE WOOLEN STUFFS.

Or he will manufacture on the usual terms, goods to suit and accommodate his customers. He will also dress wine colored or other flannels for women's wear. Wool will be received in exchange for any of his manufactured goods, and he will receive wool the Railroad Depot, and deliver the goods at the same place. Prompt and strict attention paid to all orders and directions. 28-6m. WILLIAM WALLACE, Battle Creek, Mich.

BLACK HAWK, Jun., 1st.

THIS favorite son of Old Vermont Black Hawk will stand for this season at the stable of the subscriber in the town of Plymouth, half a mile west of the village.

Black Hawk Jun., 1st.

Was sired by Old Vermont or Hill's famous Black Hawk; grand sire, Sherman Morgan; g. sire, Justin Morgan. His dam was by Young Hamiltonian, by Bishop's Hamiltonian, by Imported Messenger. The dam of Young Hamiltonian was by Leonidas, g. dam, by Belfounder.

This horse is a jet black in color, is fifteen hands high, and closely resembles his sire in style and action. He possesses an excellent temper, is pleasant to drive, and goes in good style. He received the first premium at the N. Y. State fair in 1887, beating Billy Macracken of Oshkosh, Wis., and distanced all competitors in a trial of speed at the N. Y. State fair at Syracuse in 1888. His stock are of good size, excellent in speed, style, and docility. T. W. MERRITT, Plymouth, Mich. Address the subscriber for terms and further information.

1889.

THE CLEVELAND WOOL DEPOT

Has been established over six years, and it affords the subscribers much satisfaction to know that its merits are fully appreciated by those who have patronized it during this entire time. The change made one year ago in confining its sales to cash, has met with universal favor. It is proposed to continue the cash system, and future consignors may rely upon the same prompt return which characterized our last year's business. Perhaps not quite as high figures can be obtained by adhering strictly to cash, but it will insure prompt returns, and hundreds have assured us that they obtained from five to ten cents a pound more through the Depot than they were offered last Spring from other sources, and we believe this has been true every year excepting a few of the consignments during the Fall of 1887. It should, therefore, no longer remain a question in the minds of

Wool Growers or Merchants

having Wool to dispose of, that this system of closely classifying and handling wool will prove the very best manner of selling wool which has yet been adopted. Sacks will be sent as heretofore to those who may order.

To those wishing to realize on their wool as soon as shorn, advances will be made.

AMOUNTING TO THE VALUE OF THE WOOL,

PROVIDING THE CONSIGNORS WILL ALLOW THEM OFFERED FOR SALE AT THE FIRST OR EARLY PRICES.

Cash advances will be made on receipt of Wool or Shipping Bill, as formerly.

We trust that the liberal Cash advances, the long experience in the Depot business, and established reputation of our grades among manufacturers, with undivided attention to our consignors' interests, will insure us a liberal patronage. GOODALE & CO., Cleveland, Ohio.

FURNITURE WAREHOUSE,

ON JEFFERSON AVENUE,

BELOW MICHIGAN EXCHANGE, DETROIT.

The subscribers keep constantly on hand a large stock of

ELEGANT FURNITURE,

Both Modern and Antique Styles; in Rosewood, Mahogany and Domestic Wood.

Those wishing rich and fashionable furniture, will all ways find a great variety to select from—equal in every respect to anything in the market. Being in constant receipt of Pattern Pieces from the

FASHIONABLE MAKERS IN NEW YORK,

they are enabled to guarantee the most Perfect Satisfaction to their customers.

They also keep constantly on hand a large and complete assortment of Plain Furniture of Mahogany, Cherry and Walnut. In short, every article in the line of Household Furniture will be found in their stock, including Chairs of every style and price, from four shillings to sixty dollars each. The subscribers now have on hand, and make to order, best

HAIR MATTRESSES.

Their customers can rely upon getting a genuine article.

CORN-BUSK MATTRESSES & STRAW PALLASSES constantly on hand. For the trade we keep constantly a large stock of Mahogany and Rosewood Venetian

STEVENS & ZUG.

Horse Powers, Threshers and Cleaners!

PITTS 8 AND 10 HORSE, EMERY'S 1 AND 2

Horse (read) Powers, Pease's Excelsior Powers, Horse and Cob Mills, Corn Mills and Feed Mills, Flour Mills, Cross-cut and Circular Saw Mills, Leonard Smith's Smut Machines.

D. O. & W. S. PENFIELD, No. 103 Woodward Ave., Detroit.

AGRICULTURAL BLACKSMITHING.

HUNTER & MOIR,

AGRICULTURAL IMPLEMENT MAKERS, NORTHVILLE, Wayne Co., Mich., are prepared to make to order the latest and most approved style of SCOTCH IRON PLOWS, IRON and WOODEN HARROWS, SCOTCH GRUBBERS or CULTIVATORS with three wheels, also single cultivators—all of wrought iron. All orders promptly responded to, and all orders filled with despatch.

HUNTER & MOIR, Northville Wayne Co., Mich.

13-13w

THE WILLIS' STUMP PULLER

Is the most powerful and most economical machine in use for pulling stumps, and will clear a field in less time than any other invention of a like kind.

Twenty-three stumps have been pulled with this machine in an hour and fifteen minutes. The undersigned will sell machines and rights to use and manufacture in any part of Michigan except the counties of Hillsdale, Branch, Wayne, Washtenaw, Jackson, Calhoun, Kalamazoo, Van Buren, Macomb, Genesee, Shiawassee, Saginaw, Tuscola and St. Clair, which are already sold.

All necessary information as to prices, and mode of using, will be given on application to

or to R. F. JOHNSTONE, Ypsilanti.

The Machines are manufactured at the Detroit Locomotive Works from the best Lake Superior Iron. [8]

J. L. HURD & CO.

DETROIT, MICH.

Produce and Shipping Merchants

Agents and Consignees for the following Lines:

AMERICAN TRANSPORTATION COMPANY.

CAPITAL \$900,000.

WESTERN TRANSPORTATION COMPANY.

CAPITAL \$900,000.

AND THE NEW YORK CENTRAL R. R. CO.

We would respectfully announce to the Millers, Merchants and Manufacturers of Michigan, that the recent reduction of Canal Tolls on the Erie Canal, will enable us to carry eastward, from Detroit,

FLOUR, WHEAT, CORN, OATS, WOOL, ASHES, HIDES,

And all other products of Michigan, at prices much below those of former years. Our lines are

THE MODEL LINES OF THE COUNTRY.

J. L. HURD & CO.,

Foot of Second-st.

(11)17

AYER'S CHERRY PECTORA

HAS won for itself such a renown for the cure of every variety of Throat and Lung Complaint, that it is entirely unnecessary for us to recount the evidence of its virtues, wherever it has been employed. As it has long been in constant use, and its action, we need not do more than assure the people its quality is kept up to the best it has ever been, and that it may be relied on to do for their relief all it has ever been found to do.

AYER'S CATHARTIC PILLS,

For all the Purposes of a Purgative Medicine.

FOR CONSTIPATION;
FOR THE CURE OF DYSPEPSIA;
FOR JAUNDICE;
FOR THE CURE OF INDIGESTION;
FOR HEADACHE;
FOR THE CURE OF DYSENTERY;
FOR A FOUL STOMACH;
FOR THE CURE OF DYSBENTERY;
FOR THE CURE OF PILES;
FOR THE CURE OF SCROFULA;
FOR ALL SCROFULOUS COMPLAINTS;
FOR THE CURE OF RHEUMATISM;
FOR DYSURIA;
FOR THE CURE OF LIVER COMPLAINT;
FOR THE CURE OF TETTER, TUMORS AND SALT RHEUM;
FOR THE CURE OF GOUT;
FOR THE CURE OF NEURALGIA;
FOR PURIFYING THE BLOOD.

They are sugar-coated, so that the most sensitive can take them pleasantly, and they are the best aperient in the world for all the purposes of a family.

Price 25 cents per Box; five Boxes for \$1.

Great numbers of Clergymen, Physicians, Statesmen, and eminent personages, have lent their names to certify the unparalleled usefulness of these remedies, but our space here will not permit the insertion of them. The Agents below named, furnish gratis our AMERICAN ALMANAC in which they are given; with also full descriptions of the above complaints, and the treatment that should be followed for their cure.

Do not be put off by unprincipled dealers with other preparations they make more profit on. Demand AYER'S, and take no others. The sick want the best aid there is for them, and they should have it.

Prepared by Dr. J. C. AYER,

PRACTICAL AND ANALYTICAL CHEMIST

Lowell, Mass.

All our remedies are for sale by J. S. Farrand, Detroit, and by all Druggists every where.

THE GREAT PREMIUM MOWER.

THE AULTMAN AND MILLER

MOWING MACHINE.

BUGKEYE MOWER.

AULTMAN & MILLER'S

PATENT.

PATENTED BY C. AULTMAN & L. MILLER.

To which was awarded the First Premium,

a Gold Medal and Diploma, at the

Great National Trial at

Syracuse, N. Y.,

July, 1857.

MANUFACTURED BY

C. AULTMAN & Co.,

Canton, Stark County, Ohio.

After tolling and experimenting for many years, we have finally succeeded in getting up a machine that is perfectly adapted to cut both Grain and Grass. The public are already aware that we have been manufacturing a Mowing Machine that has never unrivaled in any market.

But the Farmer wants a machine that will cut both grain and grass, provided he can get a combined machine that will mow as well as a machine made expressly for mowing; and we have a machine made expressly for this purpose.

First.—We have a perfect Mower, having several advantages over all other Mowers, and no disadvantages, which will be readily seen by examining some of its points of excellence.

Second.—We have a perfect Reaper, which has all the advantages of a single machine, and the only true way of delivering the grain at the side of the machine.

We have a cutter bar and platform for cutting grain, independent of the Mower, so that in changing the Mower into a Reaper, we just uncouple the cutter bar at the hinge and couple the Reaper platform which renders the machine complete for cutting grain.

In having two cutter bars, one for grass and the other for grain, which is perfectly adapted for doing the work it is designed to do, thus avoiding the great difficulty heretofore existing in combined machines, in having the cutter bar either too long for grass or too short for grain.

This machine has been thoroughly tried, both in grass and grain, having had a number of years in the past harvest.

The following are some of its points of excellence as a Mower:—

1st. It has not one pound of side draft.

2d. It has no more weight on the tongue, or horses' neck, than a wagon.

3d. Its draft is only 275 pounds—so reported by the Ohio State Fair Trial, 1857.

4th. It runs on two wheels which serve as drivers.

5th. It has an adjustable cutter bar and accommodates itself to an uneven surface of the ground.

6th. The cutter bar is in front of the side driving wheels and is kept in the rear. Thus enabling the driver to see the operation of the cutters, without interfering with his driving. Also, avoiding all danger of falling into the knives.

7th. The driving wheels have no cogs on them, but drive the gearing by means of pulleys and ratchets.

8th. By means of these pulleys and ratchets, the knives cease to vibrate in backing the machine.

9th. The driver, while in his seat, can see every bolt, box, and all the gearing in the machine.

10th. The gearing is all permanently arranged in the centre of the frame, distant from the driving wheels, thus avoiding all tendency of its being clogged up with mud or dirt thrown up by the drivers.

11th. The cutter bar being attached to the machine by means of hinges, can be folded up on top of the machine without removing the connecting rod, knife or track cleaner.

12th. The pulleys on the driving wheels can readily be thrown out of gear, and by folding the cutter bar as above stated, renders the machine as portable as a common cart.

13th. There is a wheel on the shoe next the gearing in front of the near shoe, thus avoiding side draft.

14th. The off shoe is only 2½ inches wide, and the last knife cuts no more than any other, therefore leaving no ridge or high stubble at the end of each swath.

15th. The cutter bar can be raised or lowered by means of an adjustable steel spring shoe at off end, and a slot in the near shoe where the wheel is attached.

16th. There are no nuts or screws at the connecting rod, which are as liable to become loose or less trouble by jerking loose, but use a cog with a spring pull and a ratchet key, thereby avoiding all possible chance of shaking loose.

Points of excellence as a Reaper:—

1st. It has all the advantages that the Mower has in the gearing, connecting rod, and draft for the horses.

2d. The grain is delivered at the side so that a whole field can be cut without taking any of it up.

3d. The driver's seat is the same as on the Mower, affording him a free view of the operations of the machine.

4th. The raker stands at the rear of the platform and is kept in the rear, thus avoiding the difficulty of dragging the grain from one gavel to another.

5th. The platform can be raised or lowered to suit all kinds of grain or ground, by means of two screws, at near side, and slot at off side, when off platform.

N. STEELE is the travelling agent, and is now soliciting orders in this State.

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